This document gives pertinent information concerning the reissuance of the VPDES Permit listed below. This permit is being processed as a Minor, Industrial permit. The discharge results from the operation of a 225 MGD water treatment plant. This permit action consists of updating the WQS and updating boilerplate. The effluent limitations and special conditions contained in this permit will maintain the Water Quality Standards of 9 VAC 25-260-00 et seq.

1. Facility Name and Mailing Address: Corbalis Water Treatment Plant, 8570 Executive Park Ave, Fairfax, VA 22031-2218 — SIC Code : 4941 WTP

   Facility Location: 1295 Fred Morin Road, Herndon, VA 22070 — County: Fairfax

   Facility Contact Name: Chad Coneway — Telephone Number: 703-698-5600

2. Permit No.: VA0087874 — Expiration Date of previous permit: May 10, 2009

   Other VPDES Permits associated with this facility: NA

   Other Permits associated with this facility: Air – VA71873; Fairfax County Wastewater Permit – A30312

   E2/E3/E4 Status: NA

3. Owner Name: Fairfax Water

   Owner Contact/Title: Joel L. Thompson, Director of Production — Telephone Number: 703-289-6000

4. Application Complete Date: November 10, 2008

   Permit Drafted By: Alison Thompson — Date Drafted: January 29, 2009

   Draft Permit Reviewed By: Joan Crowther — Date Reviewed: February 10. 2009

   Public Comment Period : Start Date: 2/24/09 — End Date: 3/26/09

5. Receiving Waters Information: See Attachment 1 for the Flow Frequency Determination

Outfall:	001	002	003
Receiving Stream Name :	Sugarland Run	Sugarland Run, UT	Old Sugarland Run, UT
Drainage Area at Outfall:	<5 sq.mi.	<5 sq.mi.	<5 sq.mi.
Stream Basin:	Potomac River	Potomac River	Potomac River
Subbasin:	Potomac River	Potomac River	Potomac River
Section:	9	9	8c
Special Standards:	None	None	PWS
Stream Class:	III	III	III
River Mile:	1ASUG6.58	1AOFT0.82	1AXIW0.24
Waterbody ID:	VAN-A10R	VAN-A10R	VAN-A10R
7Q10 Low Flow:	0.0 MGD	0.0 MGD	0.0 MGD
1Q10 Low Flow:	0.0 MGD	0.0 MGD	0.0 MGD
30Q5 Flow:	0.0 MGD	0.0 MGD	0.0 MGD
30Q10 Flow:	0.0 MGD	0.0 MGD	0.0 MGD
Harmonic Mean Flow:	0.0 MGD	0.0 MGD	0.0 MGD
303(d) Listed:	Yes	No	No
TMDL Approved:	No	No	No
Date TMDL Approved:	NA	NA	NA

6. Statutory or Regulatory Basis for Special Conditions and Effluent Limitations:

✓	State Water Control Law		EPA Guidelines
✓	Clean Water Act	✓	Water Quality Standards
✓	VPDES Permit Regulation		Other
✓	EPA NPDES Regulation		

7. Licensed Operator Requirements: NA

8. Reliability Class: Class NA

9. Permit Characterization:

	Private		Effluent Limited	✓	Possible Interstate Effect
	Federal	✓	Water Quality Limited		Compliance Schedule Required
	State		Toxics Monitoring Program Required		Interim Limits in Permit
✓	WTP		Pretreatment Program Required		Interim Limits in Other Document
	TMDL				

10. Wastewater Sources and Treatment Description:

This 225-MGD Water Treatment Plant produces potable water for Fairfax County and is operated by Fairfax Water. Water from the Potomac River is pumped to the Raw Water Control Chamber; in case of an emergency, the chamber has an overflow weir that would allow the river water to flow into Detention Pond C. Depending on the raw water quality, operators can add coagulant, sulfuric acid, sodium hypochlorite, coagulant aid, and/or caustic soda in this chamber. The raw water enters a rapid mix chamber and then into the flocculation and sedimentation basins. The clarified water flows into the ozonation chamber and is then filtered using granular activated carbon capped multimedia filters. Filters are backwashed as necessary. The backwash water is piped into two reclamation basins for processing through two plate settlers. The clarified backwash water is recycled to the raw water line and through the treatment process. The filtered water is chlorinated with sodium hypochlorite and stored in one of two clearwells. The operators can also add caustic soda, fluoride, and phosphoric acid prior to the clearwells. Fairfax Water adds ammonia prior to distribution to keep a combined chlorine residual in the distribution system. In the spring, ammonia addition is halted to allow for the annual spring flushing of the system.

Discharges from Outfalls 001, 002, and 003 are outlined in Table 1. In Form 2C, the facility indicated that for Outfall 001, the main flow contribution, besides stormwater, is from the building underdrains. For Outfall 002, the main flow contributions besides stormwater include thickener supernatant and filtrate, washwater reclamation basin drain, and thickener drain. Other possible sources to these outfalls are estimated to be on an infrequent/emergency basis. Outfall 003 receives backwash water from the raw water screens at the Potomac River. Screened river water is used to backwash the screens when they become clogged.

See Attachment 2 for a flow diagram for each of the three outfalls and of the water treatment process.

See Attachment 3 for the NPDES Permit Rating Worksheet.

TABLE 1 – Outfall Description

Outfall Number	Discharge Sources and Frequency	Treatment	Flow Average (all sources)	Outfall Latitude and Longitude
001	Building Underdrain – 7 days/week, Thickener Basin Overflow – 1/15+ years, Water Reclamation Basins Overflow – 1/10+ years, Flocculation/Sedimentation Basin Overflow – 1/11 years, Clearwell Overflow – 1/10+ years, Clearwell Drain – 1/10+ years, Pump Room Drain – 1/15+ years, Industrial Stormwater - 9.9 acres of impervious area	Dechlorination (for the Building Underdrain Flow) and Detention Ponds A and B.	0.133 MGD	38.59.30 77.22.00
002	Thickener Supernatant and Filtrate Drain – 1 week/year, Washwater Reclamation Basin Drain – 5 days/year, Thickener Drain – 4 days/year, Raw Water Control Chamber Overflow – 1/15+ years, Raw Water Pipeline Flushing – 1/5 years, Industrial Stormwater – 6.8 acres of impervious area	Neutralization (for the Thickener Supernatant) and Detention Ponds C and E.	0.022 MGD	38.59.45 77.21.30
003	Screen Backwash Water – 7 days/week	Detention Basin	0.10 MGD	39.31.15 77.20.45
The discharge locations are identified on the attached topographic maps – Seneca, MD Quadrangle (DEQ 214D) and Vienna Quadrangle (DEQ#205A) (Attachment 4).				

11. Sludge Treatment and Disposal Methods:

Solids are generated from filter backwash activities and from the water treatment sedimentation basins.

When the multi-media filters are backwashed, the solids laden water is piped to two reclamation basins. Once the solids are processed through the plate settler, the backwash water is recycled through the water treatment process. The solids residuals from the plate settlers are then pumped to one of four gravity thickener tanks at the Solids Dewatering Facility for dewatering processing and offsite disposal. In the rare event one of these thickeners overflows or needs to be drained, these solids are pumped to Detention Pond C every 2-3 months. Pond C discharges to Outfall 002.

Coagulant (Polyaluminum Chloride) is added to the raw water in a rapid mix chamber. The coagulated solids settle in the sedimentation basins and are periodically cleaned out. The solids are pumped to gravity thickeners and are then processed through belt filter presses or plate and frame (124 plates each) dewatering equipment. The volume of wet tons produced is dependent on the water production rate and the raw water turbidity. The pressed solids are stored on a concrete pad until the contractor hauls them to permitted land application sites. Any runoff from the concrete pad flows to Pond E and eventually to Outfall 002.

12. Discharges, Intakes, Monitoring Stations, Other Items in Vicinity of Discharge

TABLE 2	
1aSUG004.42	DEQ's Ambient Water Quality Monitoring Station on Sugarland Run located at the Route 7 bridge.

13. Material Storage:

See Attachment 5 for a list of materials and their quantities.

14. Site Inspection: Performed by DEQ Inspection Staff in April 2008 (see Attachment 6).

15. Receiving Stream Water Quality and Water Quality Standards:

a) Ambient Water Quality Data

Outfall 001 discharges to Sugarland Run. Outfall 002 discharges to an Unnamed Tributary (UT) to Sugarland Run. For both outfalls, the nearest downstream monitoring station with ambient water quality monitoring data is Station 1aSUG004.42, located that the Route 7 bridge crossing. 1aSUG004.42 is located approximately 2.12 rivermiles downstream from Outfall 001, and approximately 2.02 rivermiles downstream from Outfall 002.

The following is the monitoring summary for Sugarland Run at Station 1aSUG004.42, as taken from the 2008 Integrated Assessment. Outfall 001 discharges to Sugarland Run at Assessment Unit VAN-A10R_SUG02A02. Outfall 002 discharges to an Unnamed Tributary to Sugarland Run, which flows into Sugarland Run at Assessment Unit VAN-A10R_SUG01B06. The summaries for both assessment units are presented below:

Assessment Unit VAN-A10R_SUG02A02: *Class III, Section 9.*

No data was submitted to be used for the 2008 Integrated Assessment. However, citizen monitoring had previously noted a medium and high probability of adverse conditions for biota, resulting in a determination of insufficient data with observed effects for the aquatic life use. The observed effect will remain. The fish consumption, recreation, and wildlife uses were not assessed.

Assessment Unit VAN-A10R_SUG01B06: *Class III, Section 9.*

DEQ ambient water quality monitoring station 1aSUG004.42, at Route 7. Citizen monitoring station 1aSUG-14-LWC. Historical Note: In 2006, segment was divided to account for the PWS designation of the downstream portion. Also, a twenty-year trend analysis was performed on data from station 1aSUG004.42. While no applicable uses were shown to be threatened, the following statistically significant trends were observed; Total Suspended Solids (decreasing).

E.coli monitoring finds a bacterial impairment, resulting in an impaired classification for the recreation use. Citizen monitoring finds medium probability of adverse conditions for biota, resulting in a determination of fully supporting with an observed effect for the aquatic life use. The wildlife use is considered fully supporting. The fish consumption use was not assessed.

Outfall 003 discharges to an Unnamed Tributary to Old Sugarland Run. There is no monitoring data for the Unnamed Tributary to Old Sugarland Run, or Old Sugarland Run. Old Sugarland Run flows into Sugarland Run, which then flows into the Potomac River. Old Sugarland Run joins Sugarland Run at Assessment Unit VAN-A10R_SUG01A00. The following is the monitoring summary for this segment as taken from the 2008 Integrated Assessment:

Assessment Unit VAN-A10R_SUG01A00: *Class III, Section 8c, special std. PWS.*

DEQ ambient water quality monitoring station 1aSUG004.42, at Route 7. Citizen monitoring station 1aSUG-14-LWC. Historical Note: In 2006, segment was divided to account for the PWS designation of the downstream portion. Also, a twenty-year trend analysis was performed on data from station 1aSUG004.42. While no applicable uses were shown to be threatened, the following statistically significant trends were observed; Total Suspended Solids (decreasing).

E.coli monitoring finds a bacterial impairment, resulting in an impaired classification for the recreation use. Citizen monitoring finds medium probability of adverse conditions for biota, resulting in a determination of fully supporting with an observed effect for the aquatic life use. The public water supply and wildlife uses are considered fully supporting. The fish consumption use was not assessed.

b) Receiving Stream Water Quality Criteria

Part IX of 9 VAC 25-260(360-550) designates classes and special standards applicable to defined Virginia river basins and sections. The receiving streams Sugarland Run, a UT to Sugarland Run, and Old Sugarland Run, UT, are located within Section 9 and 8c of the Potomac River Basin, and classified as Class III waters.

At all times, Class III waters must achieve a dissolved oxygen (D.O.) of 4.0 mg/L or greater, a daily average D.O. of 5.0 mg/L or greater, a temperature that does not exceed 32°C, and maintain a pH of 6.0-9.0 standard units (S.U.).

Attachment 7 details other water quality criteria applicable to the receiving stream.

Ammonia:
The fresh water, aquatic life Water Quality Criteria for Ammonia are dependent on the instream temperature and pH. The 90th percentile temperature and pH values are used because they best represent the critical design conditions of the receiving stream. During the last reissuance, ambient water quality data from DEQ's ambient water quality monitoring station 1aSUG004.42 on Sugarland Run were used to develop the ammonia criteria. More recent data was reviewed and the pH and temperature values are still representative and are used to develop the criteria presented in Attachment 7.

Metals Criteria:
The Water Quality Criteria for some metals are dependent on the receiving stream's hardness (expressed as mg/l calcium carbonate). The average hardness of the receiving stream is 92 mg/l. The hardness-dependent metals criteria shown in Attachment 7 are based on this value.

Bacteria Criteria: The Virginia Water Quality Standards (9 VAC 25-260-170 B.) states sewage discharges shall be disinfected to achieve the following criteria:

1) *E. coli* bacteria per 100 ml of water shall not exceed the following:

	Geometric Mean[1]	Single Sample Maximum
Freshwater *E. coli* (N/100 ml)	126	235

[1]For two or more samples [taken during any calendar month].

c) Receiving Stream Special Standards

The State Water Control Board's Water Quality Standards, River Basin Section Tables (9 VAC 25-260-360, 370 and 380) designates the river basins, sections, classes, and special standards for surface waters of the Commonwealth of Virginia.

The receiving streams Sugarland Run and Sugarland Run, UT are located within Section 9 of the Potomac Basin. This section has been designated a Class III water with no special standards.

The receiving stream, Old Sugarland Run, UT, is located within Section 8c of the Potomac Basin. This section has been designated a Class III water with a PWS designation. Special Standard PWS designates a public water supply intake. The Board's Water Quality Standards establish numerical standards for specific parameters calculated to protect human health from toxic effects through drinking water and fish consumption. None of these parameters are believed present in the facility's discharge at levels that would cause a violation of the standard.

Both Sugarland Run and Old Sugarland Run are within the Dulles Area Watershed boundary. However, the Dulles Area Watershed Policy is not applicable to this facility, because the discharges are industrial in nature, and not from a sewage treatment plant. Current implementation of the Policy allows the reissuance of this type of permit.

d) Threatened or Endangered Species

The Virginia DGIF Fish and Wildlife Information System Database was searched for records to determine if there are threatened or endangered species in the vicinity of the discharges. The following threatened or endangered species were identified within a 2 mile radius of the discharges: Brown Creeper and Wood Turtle. The limits proposed in this draft permit are protective of the Virginia Water Quality Standards and therefore, protect the threatened and endangered species found near the discharge. A copy of the database search has been placed in the reissuance file.

16. Antidegradation (9 VAC 25-260-30):

All state surface waters are provided one of three levels of antidegradation protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier 2 water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 water bodies are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters.

During the last reissuance, the receiving streams were classified as Tier 1. This classification is still correct, because the facility discharges to streams with critical stream flows of 0.0 MGD, and at times the streams are comprised entirely of effluent. It is staff's opinion that streams comprised entirely of effluent are Tier 1.

Permit limits proposed have been established by determining wasteload allocations which will result in attaining and/or maintaining all water quality criteria which apply to the receiving stream, including narrative criteria. These wasteload allocations will provide for the protection and maintenance of all existing uses.

17. Effluent Screening, Wasteload Allocation, and Effluent Limitation Development :

To determine water quality-based effluent limitations for a discharge, the suitability of data must first be determined. Data is suitable for analysis if one or more representative data points is equal to or above the quantification level ("QL") and the data represent the exact pollutant being evaluated.

Next, the appropriate Water Quality Standards (WQS) are determined for the pollutants in the effluent. Then, the Wasteload Allocations (WLA) are calculated. In this case since the critical flows 7Q10 and 1Q10 have been determined to be zero, the WLA's are equal to the WQS. The WLA values are then compared with available effluent data to determine the need for effluent limitations. Effluent limitations are needed if the 97th percentile of the daily effluent concentration values is greater than the acute wasteload allocation or if the 97th percentile of the four-day average effluent concentration values is greater than the chronic wasteload allocation. Effluent limitations are based on the most limiting WLA, the required sampling frequency, and statistical characteristics of the effluent data.

a) Effluent Screening:
Effluent data for Outfalls, 001, 002, and 003 has been reviewed and determined to be suitable for evaluation. There have been no exceedances of the established limitations for Outfalls 001, 002, and 003.

Because of the potential sources of flows to Outfall 001, there is reasonable potential for Total Residual Chlorine to be in the 001 effluent. Therefore, Total Residual Chlorine requires a Wasteload Allocation Analysis.

The discharges from all three outfalls are considered to be intermittent in nature; therefore, only acute criteria are considered when developing effluent limitations.

b) Mixing Zones and Wasteload Allocations (WLAs):

Wasteload allocations (WLAs) are calculated for those parameters in the effluent with the reasonable potential to cause an exceedance of water quality criteria. The basic calculation for establishing a WLA is the steady state complete mix equation:

$$WLA = \frac{C_o [Q_e + (f) (Q_s)] - [(C_s) (f) (Q_s)]}{Q_e}$$

Where:
- WLA = Wasteload allocation
- C_o = In-stream water quality criteria
- Q_e = Design flow
- Q_s = Critical receiving stream flow (1Q10 for acute aquatic life criteria; 7Q10 for chronic aquatic life criteria; harmonic mean for carcinogen-human health criteria; and 30Q5 for non-carcinogen human health criteria)
- f = Decimal fraction of critical flow
- C_s = Mean background concentration of parameter in the receiving stream.

The water segments receiving the discharges from Outfalls 001, 002, and 003 are considered to have a 7Q10 and 1Q10 of 0.0 MGD. As such, there are no mixing zones, and the WLAs are equal to the C_o.

c) Effluent Limitations Toxic Pollutants, Outfalls 001 and 002–

9 VAC 25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. Those parameters with WLAs that are near effluent concentrations are evaluated for limits.

The VPDES Permit Regulation at 9 VAC 25-31-230.D. requires that monthly and weekly average limitations be imposed for continuous discharges from POTWs and monthly average and daily maximum limitations be imposed for all other continuous non-POTW discharges.

1) Total Residual Chlorine:

Chlorine is used for disinfection of the drinking water and is potentially in the discharge at Outfall 001. Staff calculated WLAs for TRC using current critical flows. In accordance with current DEQ guidance, staff used a default data point of 0.105 mg/L and the calculated WLAs to derive limits. A monthly average of 0.019 mg/L and a daily maximum limit of 0.019 mg/L are proposed to be carried forward for this discharge. (Attachment 8).

2) Ammonia/Metals/Organics:

The data submitted as part of the application was reviewed, and no limits are needed since there is no reasonable potential to exceed the applicable WQC.

d) Effluent Limitations and Monitoring, Outfalls 001, 002, and 003 – Conventional and Non-Conventional Pollutants

No changes to total suspended solids (TSS), and pH limitations are proposed. The pH limitations are set at the water quality criteria.

E. coli: The results for Outfalls 001 and 002 for *E. coli* were 5794 MPN/cmL and 1414 MPN/cmL respectively. These two outfalls are industrial discharges that do not include the discharge of treated municipal sewage or any other likely source of coliforms. It is staff's best professional opinion that the *E. coli* is due to natural sources (e.g., wildlife), and no *E. coli* limitation is necessary for these discharges.

e) Effluent Limitations and Monitoring Summary.

The effluent limitations are presented in the following table. Limits were established for Flow, Total Suspended Solids, pH, and Total Residual Chlorine.

The limit for Total Suspended Solids is based on Best Professional Judgement.

Sample Type is in accordance with the recommendations in the VPDES Permit Manual. The monitoring frequency from all Outfalls was reduced from quarterly to semiannually based on the compliance history of the facility.

18. Antibacksliding:

All limits in this permit are at least as stringent as those previously established. Backsliding does not apply to this reissuance.

19.a. Effluent Limitations/Monitoring Requirements: Outfall 001

Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date.

PARAMETER	BASIS FOR LIMITS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
		Monthly Average	Weekly Average	Minimum	Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	NA	NA	NL	1/6M	Estimate
TSS (mg/L)	2	30 mg/L	60 mg/L	NA	NA	1/6M	5G/8H
Total Residual Chlorine (mg/L)	3	0.019	0.019	NA	NA	1/6M	Grab
pH (s.u.)	3	NA	NA	6.0 S.U.	9.0 S.U.	1/6M	Grab

The basis for the limitations codes are:
1. Federal Effluent Requirements
2. Best Professional Judgment
3. Water Quality Standards

MGD = Million gallons per day.
N/A = Not applicable.
NL = No limit; monitor and report.
S.U. = Standard units.

1/6M = Once every six months. (January 1 to June 30 and July 1 to December 31)

5G/8H = Eight Hour Composite – Consisting of five (5) grab samples collected at hourly intervals until the discharge ceases or five (5) grab samples at equal time intervals for the duration of the discharge if less than 8 hours in length.

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

19.b. Effluent Limitations/Monitoring Requirements: Outfall 002

Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date.

PARAMETER	BASIS FOR LIMITS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
		Monthly Average	Weekly Average	Minimum	Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	NA	NA	NL	1/6M	Estimate
TSS (mg/L)	2	30 mg/L	60 mg/L	NA	NA	1/6M	5G/8H
pH (s.u.)	3	NA	NA	6.0 S.U.	9.0 S.U.	1/6M	Grab

The basis for the limitations codes are:
1. Federal Effluent Requirements
2. Best Professional Judgment
3. Water Quality Standards

MGD = Million gallons per day.
N/A = Not applicable.
NL = No limit; monitor and report.
S.U. = Standard units.

1/6M = Once every six months (January 1 to June 30 and July 1 to December 31)

5G/8H = Eight Hour Composite – Consisting of five (5) grab samples collected at hourly intervals until the discharge ceases or five (5) grab samples at equal time intervals for the duration of the discharge if less than 8 hours in length.
Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.
Grab = An individual sample collected over a period of time not to exceed 15-minutes.

19.c. Effluent Limitations/Monitoring Requirements: Outfall 003

Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date.

PARAMETER	BASIS FOR LIMITS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
		Monthly Average	Weekly Average	Minimum	Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	NA	NA	NL	1/6M	Estimate
pH (s.u.)	3	NA	NA	6.0 S.U.	9.0 S.U.	1/6M	Grab

The basis for the limitations codes are:
1. Federal Effluent Requirements
2. Best Professional Judgment
3. Water Quality Standards

MGD = Million gallons per day.
N/A = Not applicable.
NL = No limit; monitor and report.
S.U. = Standard units.

1/6M = Once every six months. (January 1 to June 30 and July 1 to December 31)

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.
Grab = An individual sample collected over a period of time not to exceed 15-minutes.

20. Other Permit Requirements :

Part I.B. of the permit contains quantification levels and compliance reporting instructions.
9 VAC 25-31-190.L.4.c. requires an arithmetic mean for measurement averaging and 9 VAC 25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. Specific analytical methodologies for toxics are listed in this permit section as well as quantification levels (QLs) necessary to demonstrate compliance with applicable permit limitations or for use in future evaluations to determine if the pollutant has reasonable potential to cause or contribute to a violation. Required averaging methodologies are also specified.

21. Other Special Conditions :

a) Notification Levels. The permittee shall notify the Department as soon as they know or have reason to believe:

a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:

(1) One hundred micrograms per liter;

(2) Two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter for antimony;

(3) Five times the maximum concentration value reported for that pollutant in the permit application; or

(4) The level established by the Board.

b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:

(1) Five hundred micrograms per liter;

(2) One milligram per liter for antimony;

(3) Ten times the maximum concentration value reported for that pollutant in the permit application; or

(4) The level established by the Board.

b) O&M Manual Requirement. The Code of Virginia (§62.1-44.16) and the VPDES Permit Regulation (9 VAC 25-31-190.E) require proper operation and maintenance of the permitted facility. Development and implementation of an approved operation and maintenance manual provides the means by which compliance may be assessed. Within 90 days from the effective date of the permit, the permittee is required to verify the validity of the document by either updating the manual or providing to DEQ notice that the manual remains accurate. The current operation and maintenance manual on file was approved in 1994.

c) Water Quality Criteria Reopener. The VPDES Permit Regulation at 9 VAC 25-31-220 D. requires establishment of effluent limitations to ensure attainment/maintenance of receiving stream water quality criteria. Should effluent monitoring indicate the need for any water quality-based limitations, this permit may be modified or alternatively revoked and reissued to incorporate appropriate limitations.

d) Materials Handling/Storage. 9 VAC 25-31-50 A prohibits the discharge of any wastes into State waters unless authorized by permit. Code of Virginia §62.1-44.16 and §62.1-44.17 authorize the Board to regulate the discharge of industrial waste or other waste.

Permit Section Part II. Part II of the permit contains standard conditions that appear in all VPDES Permits. In general, these standard conditions address the responsibilities of the permittee, reporting requirements, testing procedures and records retention.

23. Changes to the Permit from the Previously Issued Permit:

a) Special Conditions:
   1) The Stormwater Management conditions associated with construction activities were removed since DEQ no longer administers the program.
   2) A TMDL reopener was included with the special conditions.

b) Monitoring and Effluent Limitations:
   1) Outfalls 901 and 902 were removed since DEQ no longer administers the construction stormwater permits.
   2) Monitoring for all outfalls was reduced from quarterly to semiannually based on the compliance history of the facility.

24. Variances/Alternate Limits or Conditions:

The permittee requested and staff approved a waiver from some of the monitoring requirements found in Form 2C and Form 2F. The rationale is laid out in the cover letter of the application found in the permit file.

25. Public Notice Information:

First Public Notice Date: 2/24/09 Second Public Notice Date: 3/2/09

Public Notice Information is required by 9 VAC 25-31-280 B. All pertinent information is on file and may be inspected, and copied by contacting the: DEQ Northern Regional Office, 13901 Crown Court, Woodbridge, VA 22193, Telephone No. (703) 583-3834, althompson@deq.virginia.gov. See Attachment 9 for a copy of the public notice document.

Persons may comment in writing or by email to the DEQ on the proposed permit action, and may request a public hearing, during the comment period. Comments shall include the name, address, and telephone number of the writer, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing if public response is significant. Requests for public hearings shall state the reason why a hearing is requested, the nature of the issues proposed to be raised in the public hearing and a brief explanation of how the requester's interests would be directly and adversely affected by the proposed permit action. Following the comment period, the Board will make a determination regarding the proposed permit action. This determination will become effective, unless the DEQ grants a public hearing. Due notice of any public hearing will be given.

26. 303 (d) Listed Stream Segments and Total Max. Daily Loads (TMDL):

Outfall 001 discharging to Sugarland Run is listed. Outfall 002 discharging to an Unnamed Tributary to Sugarland Run and Outfall 003 discharging to an Unnamed Tributary to Old Sugarland Run are not listed as impaired.

Sugarland Run from the confluence of Folly Lick Branch down to the confluence with the Potomac River is listed as impaired for not meeting the recreation water quality designated use, due to exceedances of the *E. coli* bacteria criteria. Sufficient excursions from the instantaneous *E. coli* bacteria criterion (4 of 18 samples - 22.2%) were recorded at DEQ's ambient water quality monitoring station (1aSUG004.42) at the Route 7 crossing to assess this stream segment as not supporting of the recreation use goal for the 2008 water quality assessment. The segment was previously listed for a fecal coliform bacteria impairment, from 2002 through 2004. The *E. coli* bacteria impairment was first listed in 2006. The TMDL is due by 2014.

Sugarland Run discharges into the Potomac River, which is monitored and assessed by the state of Maryland. Sugarland Run discharges into the Potomac River in the Montgomery County 8-digit watershed (02140202) segment. This segment was also previously listed for a Fecal Coliform impairment; however, this impairment was removed in 2004. In the draft 2008 assessment this segment was also listed as impaired because of the aquatic life and wildlife uses, due to total suspended solids (TSS) and total phosphorus (TP) impairments. This same portion of the Potomac River (extending from the confluence of the Monocacy River down to Chain Bridge) was also listed as impaired for PCBs in Fish Tissue in the 2008 list. No TMDLs have been completed thus far for this portion of the Potomac River, and at this point, the facility has no WLAs.

TMDL Reopener: This special condition is to allow the permit to reopened if necessary to bring it in compliance with any applicable TMDL that may be developed and approved for the receiving streams.

27. Additional Comments:

Previous Board Action(s): None.

Staff Comments: None.

Public Comment: None

EPA Checklist: The checklist can be found in Attachment 10.

MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY
Office of Water Quality Assessments
629 East Main Street P.O. Box 10009 Richmond, Virginia 23219

SUBJECT: Flow Frequency Determination
FCWA Corbalis WTP - VA#0087874

TO: D. Russell Batchelor., NRO

FROM: Paul E. Herman, P.E., WQAP

DATE: January 28, 1999

COPIES: Ron Gregory, Charles Martin, File

This memo supersedes Ed Morrow's January 26, 1993 memo to Raymond Jay concerning the subject VPDES permit.

The FCWA Corbalis WTP discharges to the Sugerland Run (001), an unnamed tributary to Sugarland Run (002), and an unnamed tributary to Old Sugarland Run (003). All of the outfalls are located near Reston, VA. Stream flow frequencies are required at these sites for use by the permit writer in developing effluent limitations for the VPDES permit.

Review of the USGS Vienna Quadrangle topographic map shows that outfall 001 discharges to a dry ditch which drains to the Sugarland Run and outfall 002 discharges to and intermittent stream. The flow frequencies for intermittent streams and dry ditches are 0.0 cfs for the 1Q10, 7Q10, 30Q5, high flow 1Q10, high flow 7Q10, and harmonic mean. Outfall 003 is located on a perennial unnamed tributary of Old Sugarland Run. Stream flow frequencies for this site are provided below.

The VDEQ has operated a continuous record gage on the Difficult Run near Great Falls, VA (#01646000) since 1935. The gage is located at the Route 193 bridge, in Fairfax County, VA. The flow frequencies for the gage and the discharge point are presented below. The values at the discharge point were determined by drainage area proportions and do not address any withdrawals, discharges, or springs which may lie upstream.

Difficult Run near Great Falls, VA (#01646000):

Drainage Area = 57.9 mi^2

1Q10 = 2.3 cfs	High Flow 1Q10 = 11 cfs
7Q10 = 2.9 cfs	High Flow 7Q10 = 14 cfs
30Q5 = 5.0 cfs	HM = 23 cfs

UT to Old Sugarland Run at outfall 003 discharge point:

Drainage Area = 0.34 mi^2

1Q10 = 0.014 cfs	High Flow 1Q10 = 0.065 cfs
7Q10 = 0.017 cfs	High Flow 7Q10 = 0.082 cfs
30Q5 = 0.029 cfs	HM = 0.135 cfs

All flows should be 0.0 mgd. It is a dry stream during dry weather.

The high flow months are January through June.

If you have any questions concerning this analysis, please let me know.

S.C. Gray
10-19-99

Attachment 1

Attachment 2

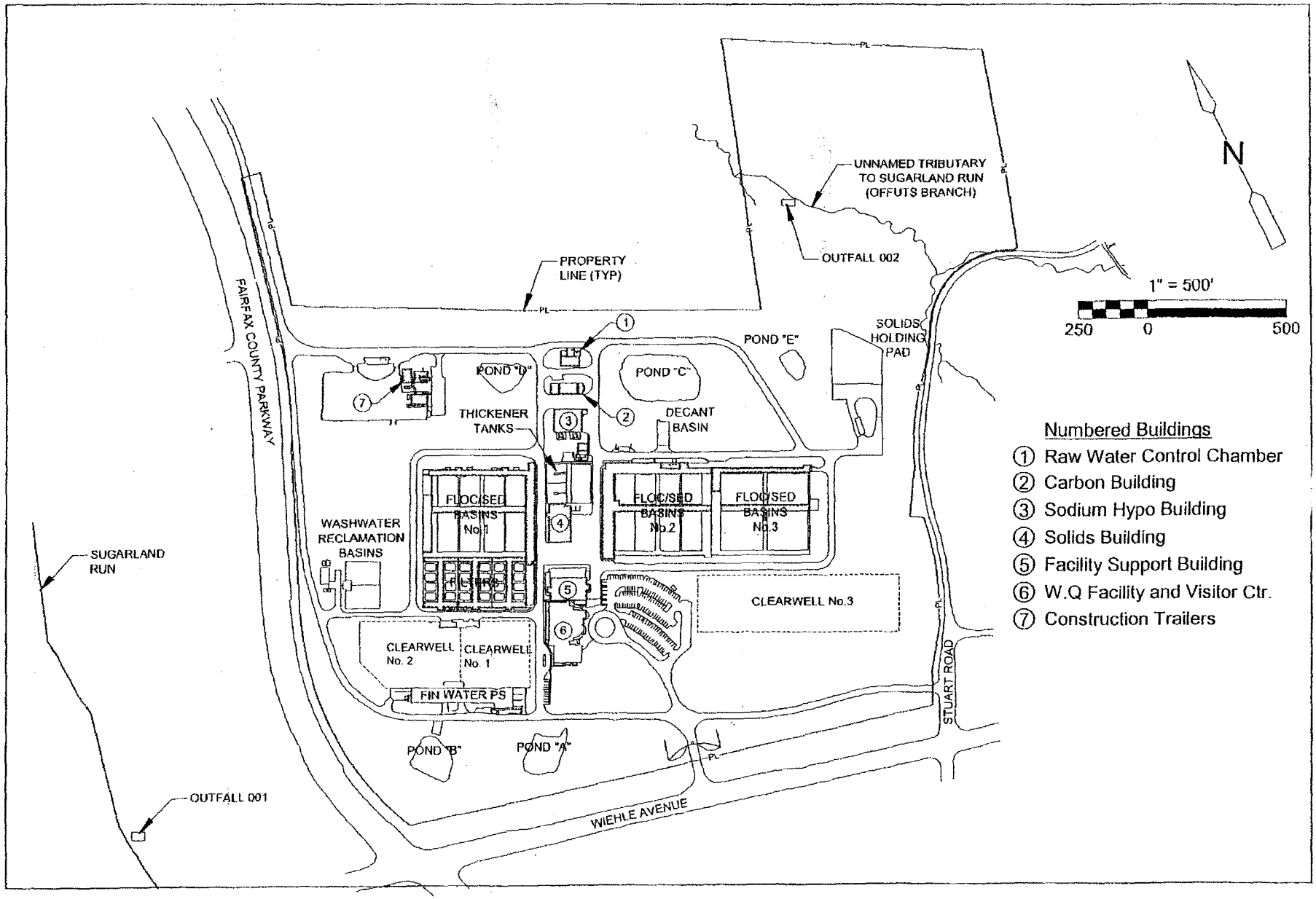


Figure 1-A
CORBALIS WTP OVERALL SITE PLAN
SHOWING BUILDINGS, ROADS AND PARKING AREAS IN VICINITY OF OUTFALLS 001 AND 002

CDM

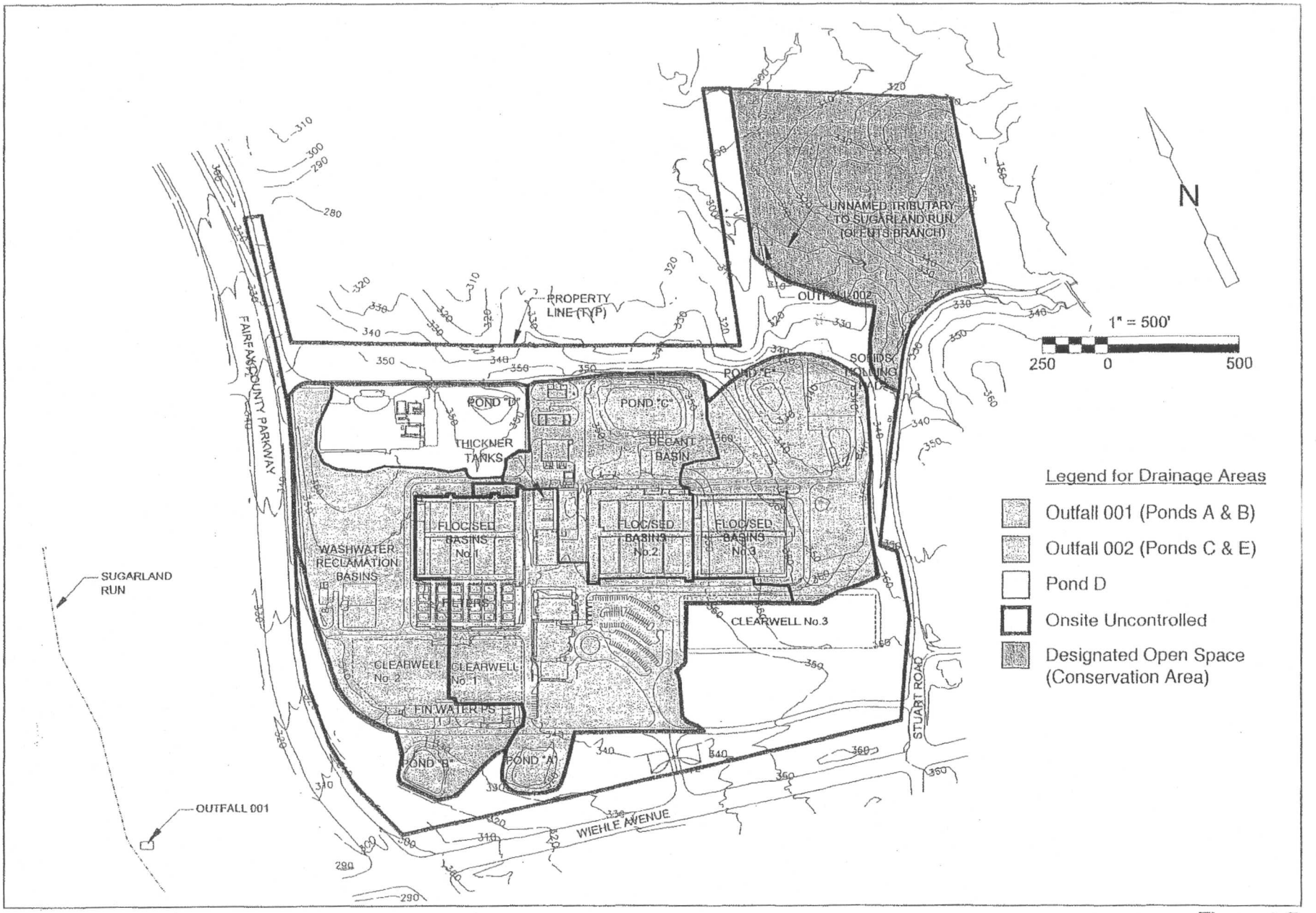
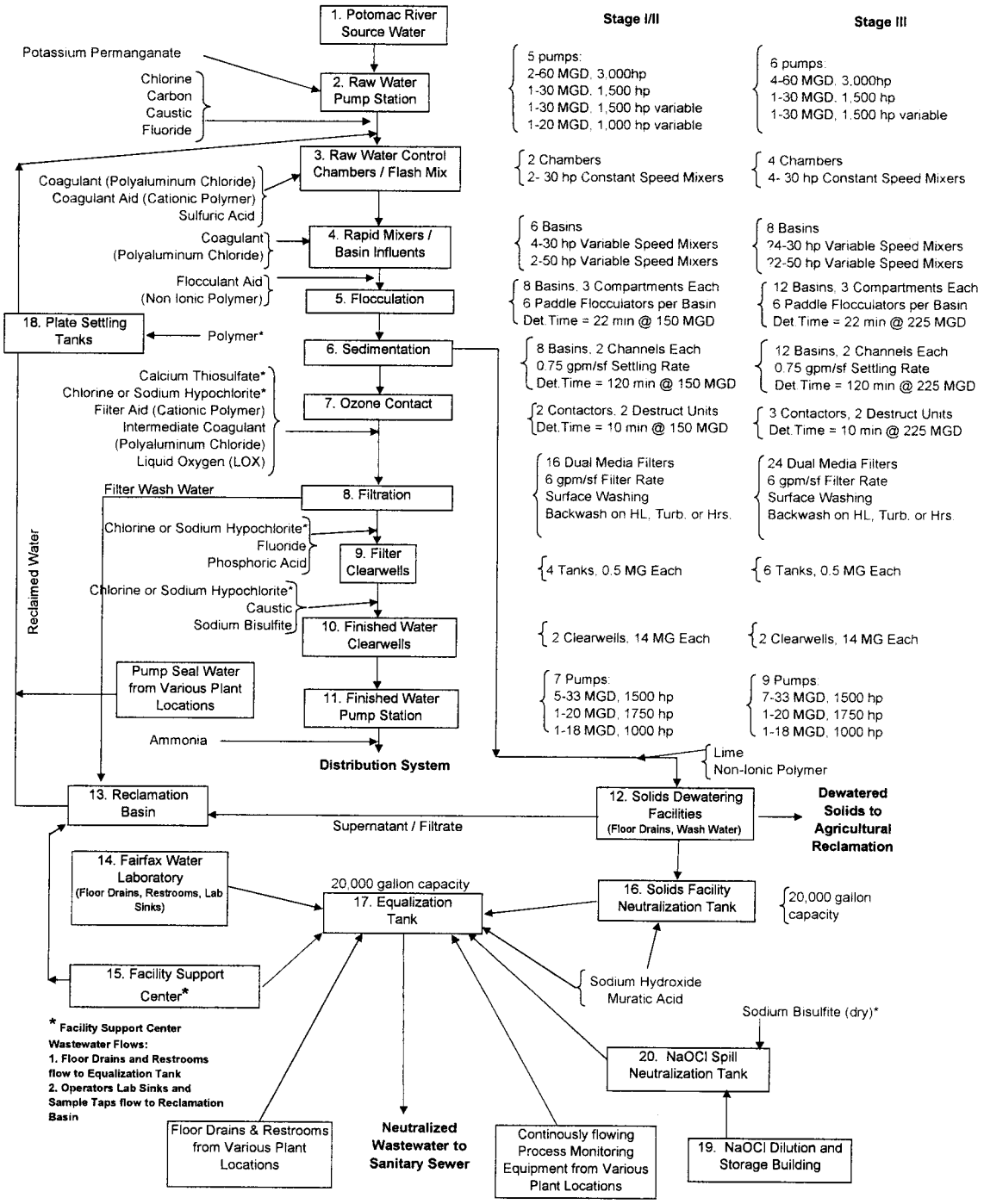


Figure 1-B
CORBALIS WATER TREATMENT PLANT
DRAINAGE AREAS FOR OUTFALLS 001 AND 002

Fairfax County Wastewater Permit Application
(Part C, Schematic Flow Diagram)



* Chemical to be added as part of Stage III

NPDES PERMIT RATING WORK SHEET

[ ] Regular Addition
[X] Ratings Confirmation
[ ] Score change, but no status Change
[ ] Deletion

VPDES NO. : VA0087874

Facility Name: Fairfax County Water Authority – Corbalis WTP
City / County: Fairfax County
Receiving Water: Sugarland Run, UT-Sugarland Run, UT-Old Sugarland Run
Reach Number:

Is this facility a steam electric power plant (sic =4911) with one or more of the following characteristics?

1. Power output 500 MW or greater (not using a cooling pond/lake)
2. A nuclear power Plant
3. Cooling water discharge greater than 25% of the receiving stream's 7Q10 flow rater

[ ] Yes; score is 600 (stop here) [X] NO; (continue)

Is this permit for a municipal separate storm sewer serving a population greater than 100,000?

[ ] YES; score is 700 (stop here)
[X] NO; (continue)

FACTOR 1: Toxic Pollutant Potential

PCS SIC Code: _____ Primary Sic Code: 4941 Other Sic Codes: _____ _____ _____

Industrial Subcategory Code: 000 (Code 000 if no subcategory)

Determine the Toxicity potential from Appendix A. Be sure to use the TOTAL toxicity potential column and check one)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
[ ] No process waste streams	0	0	[ ] 3.	3	15	[X] 7.	7	35
[ ] 1.	1	5	[ ] 4.	4	20	[ ] 8.	8	40
[ ] 2.	2	10	[ ] 5.	5	25	[ ] 9.	9	45
			[ ] 6.	6	30	[ ] 10.	10	50

Code Number Checked: 7

Total Points Factor 1: 35

FACTOR 2: Flow/Stream Flow Volume (Complete either Section A or Section B; check only one)

Section A – Wastewater Flow Only considered

Wastewater Type (see Instructions)			Code	Points
Type I:	Flow < 5 MGD	[ ]	11	0
	Flow 5 to 10 MGD	[ ]	12	10
	Flow > 10 to 50 MGD	[ ]	13	20
	Flow > 50 MGD	[ ]	14	30
Type II:	Flow < 1 MGD	[X]	21	10
	Flow 1 to 5 MGD	[ ]	22	20
	Flow > 5 to 10 MGD	[ ]	23	30
	Flow > 10 MGD	[ ]	24	50
Type III:	Flow < 1 MGD	[ ]	31	0
	Flow 1 to 5 MGD	[ ]	32	10
	Flow > 5 to 10 MGD	[ ]	33	20
	Flow > 10 MGD	[ ]	34	30

Section B – Wastewater and Stream Flow Considered

Wastewater Type (see Instructions)	Percent of Instream Wastewater Concentration at Receiving Stream Low Flow		Code	Points
Type I/III:	< 10 %	[ ]	41	0
	10 % to < 50 %	[ ]	42	10
	> 50%	[ ]	43	20
Type II:	< 10 %	[ ]	51	0
	10 % to < 50 %	[ ]	52	20
	> 50 %	[ ]	53	30

Code Checked from Section A or B: 21

Total Points Factor 2: 10

FACTOR 3: Conventional Pollutants

(only when limited by the permit)

A. Oxygen Demanding Pollutants: (check one) ☐ BOD ☐ COD ☐ Other: _____

Permit Limits: (check one)

		Code	Points
☐	< 100 lbs/day	1	0
☐	100 to 1000 lbs/day	2	5
☐	> 1000 to 3000 lbs/day	3	15
☐	> 3000 lbs/day	4	20

Code Number Checked: NA

Points Scored: 0

B. Total Suspended Solids (TSS)

Permit Limits: (check one)

		Code	Points
X	< 100 lbs/day	1	0
☐	100 to 1000 lbs/day	2	5
☐	> 1000 to 5000 lbs/day	3	15
☐	> 5000 lbs/day	4	20

Code Number Checked: 1

Points Scored: 0

C. Nitrogen Pollutants: (check one) ☐ Ammonia ☐ Other: _____

Permit Limits: (check one)

	Nitrogen Equivalent	Code	Points
☐	< 300 lbs/day	1	0
☐	300 to 1000 lbs/day	2	5
☐	> 1000 to 3000 lbs/day	3	15
☐	> 3000 lbs/day	4	20

Code Number Checked: NA

Points Scored: 0

Total Points Factor 3: 0

FACTOR 4: Public Health Impact

Is there a public drinking water supply located within 50 miles downstream of the effluent discharge (this include any body of water to which the receiving water is a tributary)? A public drinking water supply may include infiltration galleries, or other methods of conveyance that ultimately get water from the above reference supply.

☒ YES; (If yes, check toxicity potential number below)

☐ NO; (If no, go to Factor 5)

Determine the *Human Health* potential from Appendix A. Use the same SIC doe and subcategory reference as in Factor 1. (Be sure to use the *Human Health* toxicity group column – check one below)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
☐ No process waste streams	0	0	☐ 3.	3	0	☒ 7.	7	15
☐ 1.	1	0	☐ 4.	4	0	☐ 8.	8	20
☐ 2.	2	0	☐ 5.	5	5	☐ 9.	9	25
			☐ 6.	6	10	☐ 10.	10	30

Code Number Checked: 7

Total Points Factor 4: 15

FACTOR 5: Water Quality Factors

A. *Is (or will) one or more of the effluent discharge limits based on water quality factors of the receiving stream (rather than technology-base federal effluent guidelines, or technology-base state effluent guidelines), or has a wasteload allocation been to the discharge*

		Code	Points
[X]	YES	1	10
[ ]	NO	2	0

B. *Is the receiving water in compliance with applicable water quality standards for pollutants that are water quality limited in the permit?*

		Code	Points
[X]	YES	1	0
[ ]	NO	2	5

C. *Does the effluent discharged from this facility exhibit the reasonable potential to violate water quality standards due to whole effluent toxicity?*

		Code	Points
[ ]	YES	1	10
[X]	NO	2	0

Code Number Checked: A 1 B 1 C 2

Points Factor 5: A 10 + B 0 + C 0 = **10**

FACTOR 6: Proximity to Near Coastal Waters

A. Base Score: Enter flow code here (from factor 2) 21

Check appropriate facility HPRI code (from PCS):

	HPRI#	Code	HPRI Score
[ ]	1	1	20
[ ]	2	2	0
[ ]	3	3	30
[X]	4	4	0
[ ]	5	5	20

Enter the multiplication factor that corresponds to the flow code: 0.10

Flow Code	Multiplication Factor
11, 31, or 41	0.00
12, 32, or 42	0.05
13, 33, or 43	0.10
14 or 34	0.15
21 or 51	0.10
22 or 52	0.30
23 or 53	0.60
24	1.00

HPRI code checked : 4

Base Score (HPRI Score): 0 X (Multiplication Factor) 0.10 = 0

B. Additional Points – NEP Program

For a facility that has an HPRI code of 3, does the facility discharge to one of the estuaries enrolled in the National Estuary Protection (NEP) program (see instructions) or the Chesapeake Bay?

	Code	Points	
[ ]	1	10	
[X]	2	0	N/A

C. Additional Points – Great Lakes Area of Concern

For a facility that has an HPRI code of 5, does the facility discharge any of the pollutants of concern into one of the Great Lakes' 31 area's of concern (see instructions)?

	Code	Points	
[ ]	1	10	
[X]	2	0	N/A

Code Number Checked: A 4 B 2 C 2

Points Factor 6: A 0 + B 0 + C 0 = **0**

NPDES PERMIT RATING WORK SHEET

VA0087874

SCORE SUMMARY

Factor	Description	Total Points
1	Toxic Pollutant Potential	35
2	Flows / Streamflow Volume	10
3	Conventional Pollutants	0
4	Public Health Impacts	15
5	Water Quality Factors	10
6	Proximity to Near Coastal Waters	0
	TOTAL (Factors 1 through 6)	70

S1. Is the total score equal to or grater than 80 ☐ YES; (Facility is a Major) ☒ NO

S2. If the answer to the above questions is no, would you like this facility to be discretionary major?

☒ NO

☐ YES; (Add 500 points to the above score and provide reason below:

Reason: _____

NEW SCORE : 70

OLD SCORE : 60

Permit Reviewer's Name : Alison Thompson

Phone Number: (703)583-3834

Date: 1/22/09

Attachment 4

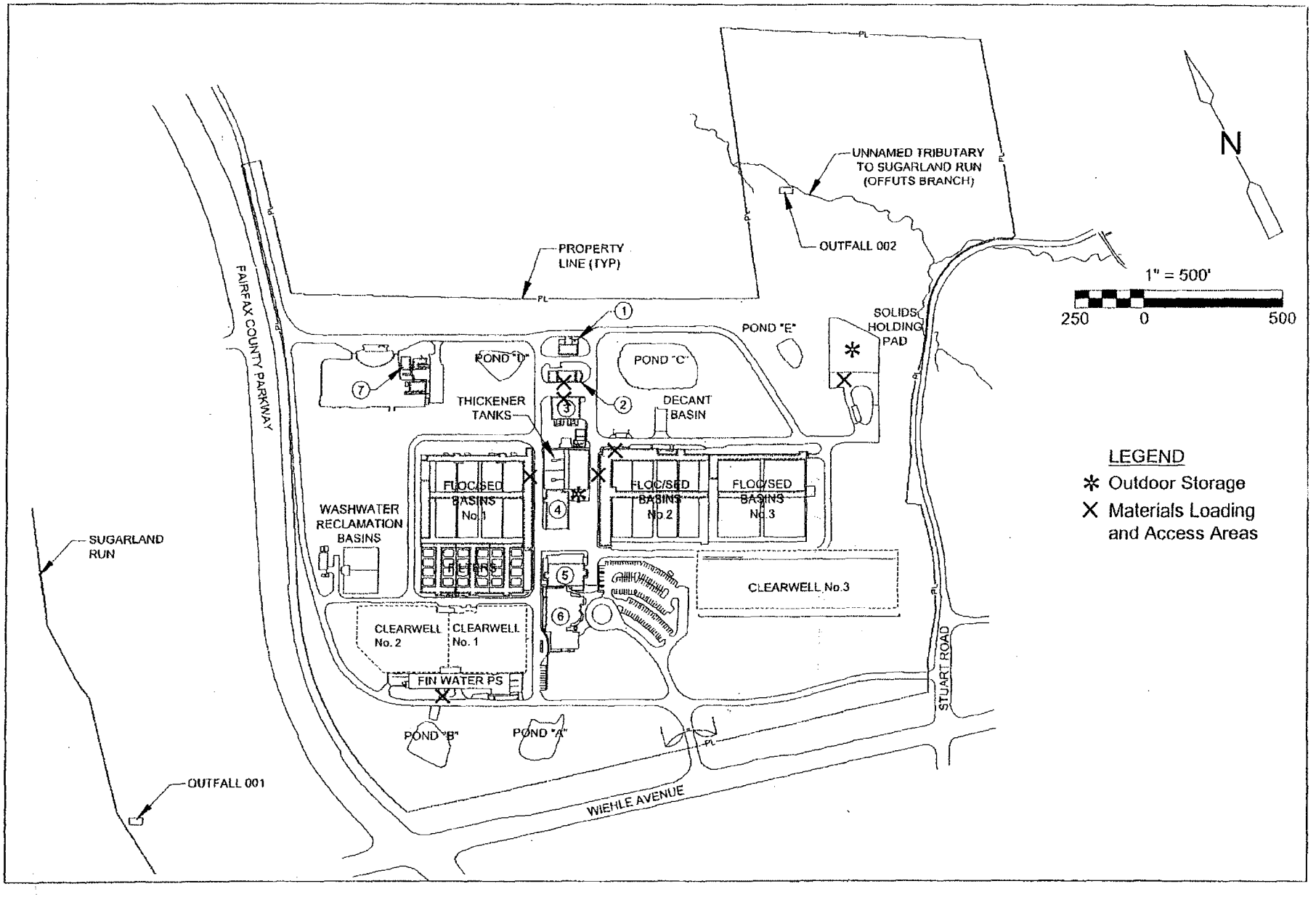


Figure 1-C
CORBALIS WTP OUTDOOR STORAGE AND MATERIALS LOADING
AND ACCESS AREAS IN VICINITY OF OUTFALLS 001 AND 002

CDM

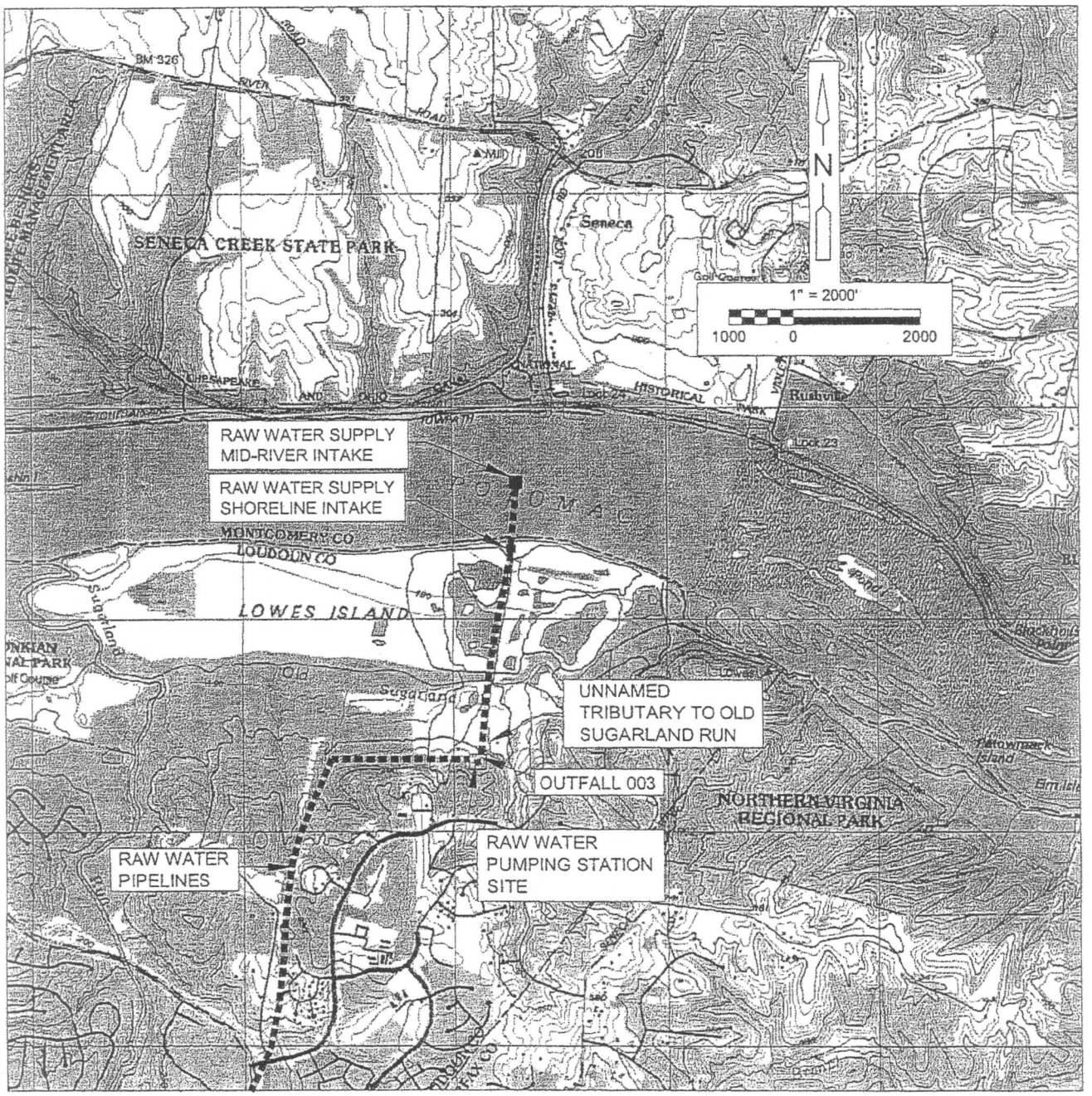


Figure 2
TOPOGRAPHIC MAP SHOWING RAW WATER
PUMPING STATION SITE AND OUTFALL 003

CDM

CORBALIS WATER TREATMENT PLANT
VPDES PERMIT NO. VA0087874
PERMIT RENEWAL APPLICATION

TABLE NO.1

DESCRIPTION OF STORAGE AND CONTAINMENT PRACTICES FOR CHEMICALS AND FUELS STORED ON-SITE

Description	Storage Capacity
1. Liquid chemicals stored inside buildings in contained areas with drains to sanitary sewer	
Sodium Hypochlorite (6%)	220,000 gallons
Aqueous Ammonia (19%)	21,890 gallons
Polyaluminum Chloride	118,430 gallons
Aluminum Sulfate	14,170 gallons
Caustic Soda (50%)	45,000 gallons
Phosphoric Acid	11,226 gallons
Hydrofluosilic Acid (25%)	12,880 gallons
Muriatic Acid	4,500 gallons
Sulfuric Acid (93%)	12,000 gallons
Calcium Thiosulfate	7,050 gallons
Polymers	12,050 gallons
2. Liquid chemicals stored outside in contained areas with drains to storm sewer (Tributary to Pond C)	
Muriatic Acid	7,800 gallons
3. Dry chemicals stored inside buildings with drains to sanitary sewer	
Pebble Quick Lime	405 tons
Perlite	31 tons
Sodium Bisulfite	1,600 gallons
Potassium Permanganate	29 tons
4. Powdered Activated Carbon Slurry Stored Inside Building with Drain and Overflow to Storm Sewer (Tributary to Pond C)	60,000 pounds
5. Fuel Stored in Double Walled Tanks	
Diesel	1,000 gallons (above grade)
Gasoline	2,000 gallons (above grade)
Heating Oil No. 2	40,000 gallons (below grade)
Waste Oil	550 gallons (below grade)
Sand/Oil Interceptor	1,000 gallons (below grade)

April 18, 2008

Mr. Joel Thompson
Director of Water Production
Fairfax Water Authority
8570 Executive Park Avenue
Fairfax, VA 22031-2218

Re: Corbalis Water Treatment Plant, Permit VA0087874

Dear Mr. Thompson:

Enclosed are copies of the technical and laboratory inspection reports generated from observations made while performing a Facility Technical Inspection at the Corbalis facility on April 7, 2008. The compliance staff would like to thank your staff for their time and assistance during the inspection.

Summaries for both the technical and laboratory inspections are enclosed. The facility had **Deficiencies** for the laboratory inspection. Please note the requirements and recommendations addressed in the technical summary. Please submit in writing a progress report to this office by May 17, 2008 for the items addressed in the summary. Your response may be sent either via the US Postal Service or electronically, via E-mail. If you chose to send your response electronically, we recommend sending it as an Acrobat PDF or in a Word-compatible, write-protected format. Additional inspections may be conducted to confirm the facility is in compliance with permit requirements.

If you have any questions or comments concerning this report, please feel free to contact me at the Northern Virginia Regional Office at (703) 583-3833 or by E-mail at twnelson@deq.virginia.gov.

Sincerely,

Terry Nelson
Environmental Specialist II

cc: Permits / DMR File
Compliance Manager
Compliance Auditor
Compliance Inspector
OWCP – (SGStell)

No problems were identified during November 2004 inspection.

Summary for Current Inspection

Comments:

- There is a refueling location adjacent to Detention Pond C.
- The maintenance shop located near the refueling area has outdoor trench drains to collect stormwater.
- The trench drains inside the maintenance shop are connected to sanitary sewer.
- No problems were observed with Ponds A, C, or D.
- Pond C is currently drained to allow for concrete lining.
- Pond B had some trash below several inlets and animal burrows on the interior side.
- Water from Pond E had significant suspended sediment due to adjacent construction work.
- A small maintenance storage shed near Pond E had a battery stored outside and multiple empty barrels.
- No problems were observed at the outfalls.

Recommendations for action:

1. **Please have all trash removed from the stormwater detention ponds.**
2. **DEQ recommends a weekly inspection of the ponds to remove trash.**
3. **Please review the policy for inspecting the pond banks for animal burrows.**
4. **Please remind staff that empty barrels should be capped or stored upside down to prevent stormwater accumulating inside them.**
5. **Vehicle batteries should be stored under cover or preferably inside a building.**
6. **Fairfax Water Authority staff are reminded they are required to report to DEQ any stormwater or unusual discharge not leaving the property through a permitted outfall.**

LABORATORY INSPECTION REPORT SUMMARY

FACILITY NAME: FWA - Corbalis	FACILITY NO: VA0087874	INSPECTION DATE: 04/07/2008
(X) Deficiencies	( ) No Deficiencies	

LABORATORY RECORDS

The Laboratory Records section had **No Deficiencies.**

GENERAL SAMPLING AND ANALYSIS

The General Sampling and Analysis section had **No Deficiencies.**

LABORATORY EQUIPMENT

The Laboratory Equipment section had **No Deficiencies.**

Recommendation:

- Please remember to verify all thermometers against a NIST certified thermometer every 12 months. One thermometer was observed to be 2 weeks overdue for verification.

INDIVIDUAL PARAMETERS

Total Residual Chlorine (TRC)

The analysis for the parameter of TRC had **No Deficiencies**.

pH

The analysis for the parameter of pH had **Deficiencies**.

1. **Holding times can not be verified without sample collection and analysis times.**
2. **No duplicate analysis has been performed to date. If citing 18th or 19th Edition, one sample per outfall should be tested each year.**

Total Suspended Solids (TSS)

The analysis for the parameter of TSS had **No Deficiencies**.

COMMENTS

The facility staff should check the DEQ website at http://www.deq.virginia.gov/vpdes/checklist.html and download the most recent inspection check sheets to keep up to date with changes in minimum laboratory requirements.

DEQ
WASTEWATER FACILITY INSPECTION REPORT
PREFACE

VPDES/State Certification No.	(RE) Issuance Date	Amendment Date	Expiration Date
VA0087874	**05/11/2004**		**05/11/2009**

Facility Name	Address	Telephone Number
FWA- Corbalis	**1295 Fred Morin Road Herndon, VA**	**703-289-6567**
Owner Name	Address	Telephone Number
Fairfax Water Authority	**8570 Executive Park Avenue Fairfax, VA**	**703-698-5600**
Responsible Official	Title	Telephone Number
Joel Thompson	**Director of Water Production**	**703-698-5600**
Responsible Operator	Operator Cert. Class/number	Telephone Number
Doug Grimes	**N.A.**	**703-289-6567**

TYPE OF FACILITY:

DOMESTIC				**INDUSTRIAL**			
Federal		Major		Major		Primary	
Non-federal		Minor		Minor	**X**	Secondary	

INFLUENT CHARACTERISTICS:	DESIGN:
Flow	**NA**
Population Served	**Unknown**
Connections Served	**Unknown**
BOD_5	
TSS	

EFFLUENT LIMITS:

Parameter	Min.	Avg.	Max.	Parameter	Min.	Avg.	Max.
Flow (MGD)		**NL**	**NL**				
pH (S.U.)	**6.0**		**9.0**				
TSS (mg/L)		**30**	**60**				
Cl_2 Inst Residual Max (mg/L)		**0.019**	**0.019**				

Receiving Stream	**Sugarland Run**
Basin	**Potomac**
Discharge Point (LAT)	**38° 59' 30" N**
Discharge Point (LONG)	**77° 22' 00" W**

VPDES NO. **VA0087874**

REV 5/00

DEQ
WASTEWATER FACILITY
INSPECTION REPORT
PART 1

Inspection date: **April 7, 2008**

Date form completed: **April 15, 2008**

Inspection by: **Terry Nelson**

Inspection agency: **DEQ NRO**

Time spent: **9 hours**

Announced: **No**

Reviewed by:

Scheduled: **Yes**

Present at inspection: **Wilamena Harback, VA DEQ; Doug Grimes, FWA**

TYPE OF FACILITY:

Domestic

[ ] Federal
[ ] Nonfederal

[ ] Major
[ ] Minor

Industrial

[ ] Major
[**X**] Minor

[ ] Primary
[ ] Secondary

Type of inspection:

[**X**] Routine
[ ] Compliance/Assistance/Complaint
[ ] Reinspection

Date of last inspection: **11/16/2004**
Agency: **DEQ NRO**

Population served: approx. **Unknown**

Connections served: approx. **Unknown**

Quarter average: (Effluent) **January - March 2008**
Flow: **0.142** MGD pH: **7.4** S.U. TSS: **1** mg/L

DATA VERIFIED IN PREFACE [**X**] Updated [ ] No changes

Has there been any new construction? [**X**] Yes [ ] No

If yes, were plans and specifications approved? [**X**] Yes [ ] No [ ] N/A

DEQ approval date: **Approved by VDH**

(A) PLANT OPERATION AND MAINTENANCE

1. Class and number of licensed operators: **Regulated by VDH**
2. Hours per day plant is manned: **24 hours per day / 7 days per week**
3. Describe adequacy of staffing. [ ] Good [**X**] Average [ ] Poor
4. Does the plant have an established program for training personnel? [**X**] Yes [ ] No
5. Describe the adequacy of the training program. [**X**] Good [ ] Average [ ] Poor
6. Are preventive maintenance tasks scheduled? [**X**] Yes [ ] No
7. Describe the adequacy of maintenance. [**X**] Good [ ] Average [ ] Poor*
8. Does the plant experience any organic/hydraulic overloading? [ ] Yes [**X**] No
   If yes, identify cause and impact on plant:
9. Any bypassing since last inspection? [ ] Yes [**X**] No
10. Is the standby electric generator operational? [ ] Yes [ ] No* [**X**] N/A
11. Is the STP alarm system operational? [ ] Yes [ ] No* [**X**] N/A
12. How often is the standby generator exercised? **N/A**
    Power Transfer Switch? **N/A**
    Alarm System? **N/A**
13. When was the cross connection control device last tested on the potable water service? **09/04/07**
14. Is sludge being disposed in accordance with the approved sludge disposal plan?
    [**X**] Yes [ ] No [ ] N/A
15. Is septage received by the facility? [ ] Yes [**X**] No
    Is septage loading controlled? [ ] Yes [ ] No
    Are records maintained? [ ] Yes [ ] No
16. Overall appearance of facility: [**X**] Good [ ] Average [ ] Poor

Comments:

12 No generators related to stormwater permit, although site has generators for water production.

14 Sludge is dewatered, stored on a pad, and hauled by contractor for land application.

(B) PLANT RECORDS

1. Which of the following records does the plant maintain?

Operational Logs for each unit process	[**X**] Yes	[ ] No	[ ] N/A
Instrument maintenance and calibration	[**X**] Yes	[ ] No	[ ] N/A
Mechanical equipment maintenance	[**X**] Yes	[ ] No	[ ] N/A
Industrial waste contribution (Municipal Facilities)	[ ] Yes	[ ] No	[**X**] N/A

2. What does the operational log contain?

[**X**] Visual observations
[**X**] Laboratory results
[ ] Control calculations
[**X**] Flow measurement
[**X**] Process adjustments
[**X**] Other (specify)

Comments: **Log includes dosage rates for caustic soda, ozone, polyaluminum chloride (PACL)**

3. What do the mechanical equipment records contain?

[**X**] As built plans and specs
[**X**] Manufacturers instructions
[**X**] Lubrication schedules
[**X**] Spare parts inventory
[**X**] Equipment/parts suppliers
[ ] Other (specify)

Comments:

4. What do the industrial waste contribution records contain? (Municipal Only)

[ ] Waste characteristics
[ ] Impact on plant
[ ] Locations and discharge types
[ ] Other (specify)

Comments:

5. Which of the following records are kept at the plant and available to personnel?

[**X**] Equipment maintenance records
[ ] Industrial contributor records
[**X**] Sampling and testing records
[**X**] Operational Log
[**X**] Instrumentation records

6. Records not normally available to plant personnel and their location: **None**

7. Were the records reviewed during the inspection? [**X**] Yes [ ] No

8. Are the records adequate and the O & M Manual current? [**X**] Yes [ ] No

9. Are the records maintained for the required 3-year time period? [**X**] Yes [ ] No

Comments:

(C) SAMPLING

1. Do sampling locations appear to be capable of providing representative samples? [**X**] Yes [ ] No*
2. Do sample types correspond to those required by the VPDES permit? [**X**] Yes [ ] No*
3. Do sampling frequencies correspond to those required by the VPDES permit? [**X**] Yes [ ] No*
4. Are composite samples collected in proportion to flow? [ ] Yes [**X**] No* [ ] N/A
5. Are composite samples refrigerated during collection? [**X**] Yes [ ] No* [ ] N/A
6. Does plant maintain required records of sampling? [**X**] Yes [ ] No*
7. Does plant run operational control tests? [**X**] Yes [ ] No

Comments: **During a 5 hour period, one 1 liter sample is collected hourly. Using a graduated cylinder, 400 mL of each sample are poured off into a composite to yield a 2 liter composite sample.**

(D) TESTING

1. Who performs the testing? [ ] Plant [**X**] Central Lab [ ] Commercial Lab

Name: **Fairfax Water Authority's central lab is located at the Corbalis facility.**

If plant performs any testing, complete 2-4.

2. What method is used for chlorine analysis? **Amperometric Titration**
3. Does plant appear to have sufficient equipment to perform required tests? [**X**] Yes [ ] No*
4. Does testing equipment appear to be clean and/or operable? [**X**] Yes [ ] No*

Comments:

(E) FOR INDUSTRIAL FACILITIES WITH TECHNOLOGY BASED LIMITS ONLY

1. Is the production process as described in the permit application? (If no, describe changes in comments)
   [ ] Yes [ ] No [**X**] N/A
2. Do products and production rates correspond as provided in the permit application? (If no, list differences)
   [ ] Yes [ ] No [**X**] N/A
3. Has the State been notified of the changes and their impact on plant effluent? Date:
   [ ] Yes [ ] No* [**X**] N/A

Comments:

Overview

Wastewater Treatment Description:
The Corbalis Water Treatment Plant is rated for 150 MGD and produces potable water for Fairfax County. The plant is operated by the Fairfax Water Authority (FWA). Water from the Potomac River is screened and pumped 7 miles to the Raw Water Control Chamber. In case of an emergency, the chamber has an overflow weir that would allow the river water to flow into Detention Pond C. Depending on the raw water quality, operators can add coagulant, coagulant aid, sulfuric acid, fluoride, chlorine gas, and/or caustic soda in this chamber. The raw water enters a rapid mix chamber and then into the flocculation and sedimentation basins. The clarified water flows into the ozonation chamber and is then filtered using granular activated carbon capped multimedia filters. Filters are backwashed as necessary. The backwash water is piped into two reclamation basins for settling, and the clarified backwash water is recycled to the raw water line and through the treatment process. The filtered water is chlorinated with chlorine gas from 1 ton cylinders and stored in one of two clearwells with 28 million gallon combined storage. As part of the recent construction, a new clearwell was added and the 2 original clearwells were combined. The operators can also add caustic soda, fluoride, and zinc orthophosphate prior to the clearwells. FWA adds ammonia prior to distribution to create a chloramines residual in finished water. In the spring, ammonia addition is halted; creating a free chlorine residual in the finished water during the annual distribution system flushing.

An expansion of the treatment facilities began in summer 2004 with completion expected in spring 2008. The final production capacity of the facility will be 225 MGD. Part of the upgrade will include a change in disinfection methods by installing sodium hypochlorite tanks and appropriate pumps and discontinuing the use of the 1 ton chlorine gas cylinders.

Discharges are from Outfalls 001, 002, and 003. The facility has provided information that indicates that for Outfall 001, the main flow contribution is from the building underdrains with some stormwater. For Outfall 002, the main flow contributions include thickener supernatant and filtrate, drains for the backwash water reclamation basins, and thickener drains. Other possible sources to these outfalls are estimated to be on an infrequent/emergency basis. Outfall 003 receives backwash water from the raw water screens at the Potomac River. Screened river water is used to backwash the screens when they become clogged.

Stormwater from construction activities discharges from Outfalls 001 and 002. For the purposes of monitoring stormwater discharges, Outfall 001 is labeled Outfall 901, and Outfall 002 is labeled Outfall 902.

Solids Treatment and Disposal Methods:
Solids are generated from filter backwash activities and from the water treatment sedimentation basins.

When the multi-media filters are backwashed, the solids laden water is piped to two reclamation basins. Once the solids settle, the backwash water is recycled through the water treatment process. The solids generated are pumped to Detention Pond C every 2-3 months. Pond C discharges to Outfall 002. Pond C is currently drained and being lined with concrete.

Polyaluminum chloride (PACL) is added to the raw water in a rapid mix chamber. The solids settle in the sedimentation basins and the solids are continuously delivered to a solids channel. The solids channel has scrapers running perpendicular to the sedimentation basin channels. The solids are pumped to gravity thickeners and are then sent to the 2 plate frame filter presses (124 plates each). The volume of wet tons produced is dependent on the water production rate and the raw water turbidity. The pressed solids are stored on a concrete pad until the contractor hauls them to permitted land application sites. Any runoff from the concrete pad flows to Pond E and eventually to Outfall 002.

UNIT PROCESS: Effluent/Plant Outfall 001

1. Type Outfall [**X**] Shore based [ ] Submerged
2. Type if shore based: [**X**] Wingwall [ ] Headwall [ ] Rip Rap
3. Flapper valve: [ ] Yes [**X**] No [ ] N/A
4. Erosion of bank: [ ] Yes [**X**] No [ ] N/A
5. Effluent plume visible? [ ] Yes* [**X**] No
6. Condition of outfall and supporting structures: [**X**] Good [ ] Fair [ ] Poor*
7. Final effluent, evidence of following problems:

a.	oil sheen	[ ] Yes*	[**X**] No
b.	grease	[ ] Yes*	[**X**] No
c.	sludge bar	[ ] Yes*	[**X**] No
d.	turbid effluent	[ ] Yes*	[**X**] No
e.	visible foam	[ ] Yes*	[**X**] No
f.	unusual color	[ ] Yes*	[**X**] No

Comments:

- **Detention Ponds A and B discharge to this outfall.**
- **Detention Pond B had animal burrows in the banks and trash below several inlet pipes.**
- **The samples are collected and flows estimated at the end of the discharge pipe.**
- **An in-situ pH reading of 6.60 SU @9.8° C was recorded at 0950 hours.**
- **A chlorine residual of 0.03 mg/L (< QL) was measured at 0958 hours.**

UNIT PROCESS: Effluent/Plant Outfall 002

1. Type Outfall [**X**] Shore based [ ] Submerged
2. Type if shore based: [**X**] Wingwall [ ] Headwall [ ] Rip Rap
3. Flapper valve: [ ] Yes [**X**] No [ ] N/A
4. Erosion of bank: [ ] Yes [**X**] No [ ] N/A
5. Effluent plume visible? [ ] Yes* [**X**] No
6. Condition of outfall and supporting structures: [**X**] Good [ ] Fair [ ] Poor*
7. Final effluent, evidence of following problems:

a.	oil sheen	[ ] Yes*	[**X**] No
b.	grease	[ ] Yes*	[**X**] No
c.	sludge bar	[ ] Yes*	[**X**] No
d.	turbid effluent	[ ] Yes*	[**X**] No
e.	visible foam	[ ] Yes*	[**X**] No
f.	unusual color	[ ] Yes*	[**X**] No

Comments:

- **Detention Ponds C and E discharge to this oufall.**
- **Detention Pond D is a grassy indentation near Pond C.**
- **Detention Pond C is currently drained to allow concrete lining of the basin.**
- **The samples are collected and flows estimated at the end of the discharge pipe.**

UNIT PROCESS: Effluent/Plant Outfall 003

1. Type Outfall [**X**] Shore based [ ] Submerged
2. Type if shore based: [**X**] Wingwall [ ] Headwall [ ] Rip Rap
3. Flapper valve: [ ] Yes [**X**] No [ ] N/A
4. Erosion of bank: [ ] Yes [**X**] No [ ] N/A
5. Effluent plume visible? [ ] Yes* [**X**] No
6. Condition of outfall and supporting structures: [**X**] Good [ ] Fair [ ] Poor*
7. Final effluent, evidence of following problems:

a.	oil sheen	[ ] Yes*	[**X**] No
b.	grease	[ ] Yes*	[**X**] No
c.	sludge bar	[ ] Yes*	[**X**] No
d.	turbid effluent	[ ] Yes*	[**X**] No
e.	visible foam	[ ] Yes*	[**X**] No
f.	unusual color	[ ] Yes*	[**X**] No

Comments:

- **Outfall 003 is the backwash from traveling screens.**
- **This outfall is located at the intake station located off Seneca Road.**

DEPARTMENT OF ENVIRONMENTAL QUALITY - WATER DIVISION
LABORATORY INSPECTION REPORT

10/01

FACILITY NO:	INSPECTION DATE:	PREVIOUS INSP. DATE:	PREVIOUS EVALUATION:	TIME SPENT:
VA0087874	04/07/2008	11/16/2004	Deficiencies	2 hours

NAME/ADDRESS OF FACILITY:	FACILITY CLASS:	FACILITY TYPE:	UNANNOUNCED INSPECTION?
FCWA Corbalis WTP 1295 Fred Morin Road Herndon, VA 20170	( ) MAJOR (X) MINOR ( ) SMALL ( ) VPA/NDC	( ) MUNICIPAL (X) INDUSTRIAL ( ) FEDERAL ( ) COMMERCIAL LAB	(X) YES ( ) NO **FY-SCHEDULED INSPECTION?** (X) YES ( ) NO

INSPECTOR(S):	REVIEWERS:	PRESENT AT INSPECTION:
Terry Nelson, Wilamena Harback		Melissa Billman, Craig Rice

LABORATORY EVALUATION	DEFICIENCIES? Yes	No
LABORATORY RECORDS		X
GENERAL SAMPLING & ANALYSIS		X
LABORATORY EQUIPMENT		X
pH ANALYSIS PROCEDURES	X	
TOTAL RESIDUAL CHLORINE ANALYSIS PROCEDURES		X
TOTAL SUSPENDED SOLIDS		X

QUALITY ASSURANCE/QUALITY CONTROL

Y/N	QUALITY ASSURANCE METHOD	PARAMETERS	FREQUENCY
Y	REPLICATE SAMPLES	TSS	Each Analysis
N	SPIKED SAMPLES		
N	STANDARD SAMPLES		
N	SPLIT SAMPLES		
Y	SAMPLE BLANKS	TSS	Each Analysis
N	OTHER		
N	EPA-DMR QA DATA?	RATING: ( ) No Deficiency ( ) Deficiency ( ) N/A	
N	QC SAMPLES PROVIDED?	RATING: ( ) No Deficiency ( ) Deficiency ( ) N/A	

FACILITY #: **VA0087874**

LABORATORY RECORDS SECTION

LABORATORY RECORDS INCLUDE THE FOLLOWING:

X	SAMPLING DATE	X	ANALYSIS DATE		CONT MONITORING CHART
X	SAMPLING TIME	X	ANALYSIS TIME	X	INSTRUMENT CALIBRATION
X	SAMPLE LOCATION	X	TEST METHOD		INSTRUMENT MAINTENANCE
					CERTIFICATE OF ANALYSIS

WRITTEN INSTRUCTIONS INCLUDE THE FOLLOWING:

X	SAMPLING SCHEDULES	X	CALCULATIONS	X	ANALYSIS PROCEDURES

	YES	NO	N/A
DO ALL ANALYSTS INITIAL THEIR WORK?	X		
DO BENCH SHEETS INCLUDE ALL INFORMATION NECESSARY TO DETERMINE RESULTS?	X		
IS THE DMR COMPLETE AND CORRECT? MONTH(S) REVIEWED: **January – March 2008**	X		
ARE ALL MONITORING VALUES REQUIRED BY THE PERMIT REPORTED?	X		

GENERAL SAMPLING AND ANALYSIS SECTION

	YES	NO	N/A
ARE SAMPLE LOCATION(S) ACCORDING TO PERMIT REQUIREMENTS?	X		
ARE SAMPLE COLLECTION PROCEDURES APPROPRIATE?	X		
IS SAMPLE EQUIPMENT CONDITION ADEQUATE?	X		
IS FLOW MEASUREMENT ACCORDING TO PERMIT REQUIREMENTS?	X		
ARE COMPOSITE SAMPLES REPRESENTATIVE OF FLOW?	X		
ARE SAMPLE HOLDING TIMES AND PRESERVATION ADEQUATE?	X		
IF ANALYSIS IS PERFORMED AT ANOTHER LOCATION, ARE SHIPPING PROCEDURES ADEQUATE? LIST PARAMETERS AND NAME & ADDRESS OF LAB:			X

LABORATORY EQUIPMENT SECTION

	YES	NO	N/A
IS LABORATORY EQUIPMENT IN PROPER OPERATING RANGE?	X		
ARE ANNUAL THERMOMETER CALIBRATION(S) ADEQUATE?	X		
IS THE LABORATORY GRADE WATER SUPPLY ADEQUATE?			X
ARE ANALYTICAL BALANCE(S) ADEQUATE?	X		

ANALYST:	Jim Miller	VPDES NO	VA0087874

Parameter: Hydrogen Ion (pH)
Method: Electrometric
01/08

METHOD OF ANALYSIS

X	18th Edition of Standard Methods-4500-H-B
	21st or On-Line Edition of Standard Methods-4500-H-B (00)

	pH is a method defined analyte so modifications are not allowed. [40 CFR Part 136.6]	Y	N
1)	Is a certificate of operator competence or initial demonstration of capability available for each analyst/operator performing the analysis? **NOTE:** Analyze 4 samples of known pH. May use external source of buffer (different lot/manufacturer than buffers used to calibrate meter). Recovery for each of the 4 samples must be ± 0.1 SU of the known concentration of the sample. [SM 1020 B.1]	X	
2)	Is the electrode in good condition (no chloride precipitate, etc.)? [2.b/c and 5.b]	X	
3)	Is electrode storage solution in accordance with manufacturer's instructions? [Mfr.]	X	
4)	Is meter calibrated on at least a daily basis using three buffers all of which are at the same temperature? [4.a] NOTE: Follow manufacturer's instructions.	X	
5)	After calibration, is a buffer analyzed as a check sample to verify that calibration is correct? Agreement should by within ± 0.1 SU. [4.a]	X	
6)	Do the buffer solutions appear to be free of contamination or growths? [3.1]	X	
7)	Are buffer solutions within their listed shelf life or have they been prepared within the last 4 weeks? [3.a]	X	
8)	Is the cap or sleeve covering the access hole on the reference electrode removed when measuring pH? [Mfr.]	NA	
9)	For meters with ATC that also have temperature display, was the thermometer calibrated annually? [SM2550 B.1]	X	
10)	Is the temperature of buffer solutions and samples recorded when determining pH? [4.a]	X	
11)	Is sample analyzed within 15 minutes of collection? [40 CFR 136.6]	See notes	
12)	Was the electrode rinsed and then blotted dry between reading solutions (Disregard if a portion of the next sample analyzed is used as the rinse solution)? [4.a]	X	
13)	Is the sample stirred gently at a constant speed during measurement? [4.b]	X	
14)	Does the meter hold a steady reading after reaching equilibrium? [4.b]	X	
15)	Is a duplicate sample analyzed after every 20 samples if citing 18th or 19th Edition [1020 B.6] or daily for 20th or 21st Edition [Part 1020] Note: Not required for *in situ* samples.		X
16)	Is pH of duplicate samples within 0.1 SU of the original sample? [Part 1020]		X
17)	Is there a written procedure for which result will be reported on DMR (Sample or Duplicate) and is this procedure followed? [DEQ]		X

COMMENTS:	
PROBLEMS:	**11. Holding times can not be verified without sample collection and analysis times.** **15. No duplicate analysis has been performed to date. If citing 18th or 19th Edition, one sample per outfall should be tested each year.**

ANALYST:	Jim Miller	VPDES NO	VA0087874

Parameter: Total Residual Chlorine
Method: Amperometric Titration (Direct)
04/01

METHOD OF ANALYSIS:

X	18th EDITION OF STANDARD METHODS-4500-CL D
	EPA METHODS FOR CHEMICAL ANALYSIS-330.1
	ASTM D1253 - 86(92)

		Y	N
1)	Is PAO normality 0.00564N? [SM Cl C.3.a;330.1-5.1]	X	
2)	Are reagents free of contamination or growths? [Permit]	X	
3)	Is KI solution discarded when it turns yellow? [SM-3.c; 330.1-5.3]	X	
4)	Is the pH of the acetate buffer solution 4? [SM-3.d; 330.1-5.5]	X	
5)	Are reagents within their indicated shelf lives? [Permit]	X	
6)	Is sample volume 200 mL for chlorine residual up to 2 mg/L; 100 mL or proportionately less diluted up to 200 mL for chlorine residuals in excess of 2 mg/L? [SM-4.a; 330.1-6.1]	X	
7)	Is at least 1 mL KI solution added? [SM-4.c; 330.1-6.3]	X	
8)	Is at least 1 mL acetate buffer added after KI solution? [SM-4.c; 330.1-6.4]	X	
9)	Is titrant added in progressively smaller increments until all needle movement ceases? [SM-4.c; 330.1-6.6]	X	
10)	Is last increment of titrant that causes no needle response subtracted from final volume? [SM-4.c; 330.1-6.6]	X	
11)	Is the sample value calculated correctly? [SM-5; 330.1-7.1] TRC (mg/L) = $\frac{A \times 200}{\text{mL of sample}}$ A = mL PAO used	X	

COMMENTS:	
PROBLEMS:	**No problems observed.**

ANALYST:	**Rebecca Abel**	VPDES NO	**VA0087874**

Parameter: Total Suspended Solids
Method: Gravimetric, 103-105 °C
01-08

METHOD OF ANALYSIS:

X	18th Edition of Standard Methods-2540-D
	21st or On-Line Edition of Standard Methods-2540-D (97)

TSS is a method-defined analyte so modifications are not allowed. [40 CFR Part 136.6]

		Y	N
1)	Is a certificate of operator competence or initial demonstration of capability available for each analyst/operator performing the analysis? **NOTE:** Analyze 4 samples of known TSS with each sample having appropriate % recovery. [SM 1020 B.1]	X	
2)	Is glass fiber filter a Whatman Grade 934AH, Pall Type A/E, Millipore Type AP40, or Scientific Specialties grade 161, Environmental Express Pro Weigh, or equivalent? [2]	X	
3)	Is a desiccator, drying oven for operating at 103° - 105° C, analytical balance, filtration apparatus, and suction flask available and in operable condition? [2]	X	
4)	Does desiccator have active color indicating desiccant? [2]	X	
5)	Is the analytical balance capable of weighing to 0.1 mg? [2]	X	
6)	To prepare filter, is it washed under vacuum, with 3 successive 20 mL portions of reagent-grade water? [3.a]	NA	
7)	Is the washed filter dried in oven at 103° - 105° C for at least 1 hour, cooled in desiccator, and weighed? Is drying-cooling-weighing cycle repeated until a constant dry weight is obtained or until weight change is less than 4% of previous weight or 0.5 mg, whichever is less? NOTE: See question 19. (**MUST DOCUMENT**) [3.a]	NA	
8)	After drying, is filter, Gooch crucible and/or weighing dish stored in desiccator until needed and then reweighed prior to use? [3.a]	NA	
9)	Is filter or Gooch crucible handled with forceps or tongs? [Permit]	X	
10)	Is sample well-mixed prior to filtration? [3.c;]	X	
11)	Is sample volume measured using Class A graduated cylinder? [SM 1070 B.2]	X	
12)	Is filter seated with reagent grade water prior to filtering sample? [3.c]	X	
13)	Is sample filtered under vacuum? [3.c]	X	
14)	Is sample filtration time limited to 10 minutes? Documentation is required. [3.b]	X	
15)	After sample is filtered, is filter washed with 3 successive 10 mL portions of reagent-grade water? [3.c]	X	
16)	Is filter, Gooch crucible and/or weighing dish dried for at least one hour at 103° - 105° C and is drying time documented? [3.c]	X	
17)	Is filter, Gooch crucible and/or weighing dish desiccated until they reach room temperature prior to weighing it? [3.c]	X	
18)	Is drying-cooling-weighing cycle repeated until a constant dry weight is obtained or until weight change is less than 4% of previous weight or 0.5 mg, whichever is less? (**MUST DOCUMENT**) [3.c]	X	
19)	If sufficiency of the drying time is cited, is it checked periodically? (VPDES permit holders conducting their testing must verify the adequacy of drying time by documented drying-cooling-weighting cycle once per year for each outfall. Commercial or centralized laboratories must maintain records for each client/outfall documenting drying time adequacy with drying-cooling-weighting cycle. This may also be applied to filter preparation. These records must be updated annually.) [Permit]	X	

		Y	N
20)	Was filter yield between 10.0 mg and 200 mg (18th), 2.5 mg and 200 mg (21st), or is at least 1000 mLs of sample filtered? [3.b]	X	
21)	Is the TSS of the sample calculated correctly? [4] TSS (mg/L) = $\frac{(A - B) \times 1000\ mL/L}{\text{sample volume (mL)}}$ A= weight of filter + dried residue (mg) B= weight of filter (mg)	X	
22)	Is a duplicate sample analyzed after every 20 samples if citing 18th or 19th Edition [1020 B.6] or after every 10 samples for 20th or 21st Edition [2540 D.3.c]	X	
23)	Do the results of the duplicate samples agree within 5% of their average? [3.c]	X	

COMMENTS:	**Facility uses pre-washed Environmental Express Pro Weigh filters.**
PROBLEMS:	**No problems observed**

DEPARTMENT OF ENVIRONMENTAL QUALITY - WATER DIVISION
EQUIPMENT TEMPERATURE LOG/THERMOMETER CALIBRATION CHECK SHEET

01-08

FACILITY NAME:	**FWA – Corbalis**	VPDES NO:	**VA0087874**	DATE:	**April 7, 2008**

EQUIPMENT	RANGE	IN RANGE		INSPECTION READING °C		CHECK & LOG DAILY		CORRECT INCREMENT		ANNUAL THERMOMETER VERIFICATION				
										Is the NIST/NIST Traceable Reference Thermometer within Manufacturer's expiration date or recertified yearly?				Yes\No
										DATE CHECKED	MARKED		CORR FACTOR °C	INSPECTION TEMP °C
		Y	N	DEQ	Site	Y	N	Y	N		Y	N		
SAMPLE REFRIGER.	1-6° C	X		3.3	3.3	X		X		03/22/07	X		-0.2	4
AUTO SAMPLER	1-6° C													
REAGENT REFRIGER.	1-6° C													
pH METER	± 1° C	X								02/28/08	X		+0.1	25
DO METER	± 1° C													
OUTFALL THERMOMETER	± 1° C													
BOD INCUBATOR	20° C ± 1° C													
INCUBATOR	35 ± .5° C													
WATER BATH	44.5 ± .2° C													
O & G WATER BATH	70 ± 2° C													
Hg WATER BATH	95° C													
SOLIDS DRYING OVEN	103-105° C	X		103.8	103.8	X		X		10/13/07	X		+0.1	104
AUTOCLAVE	121° C IN 30 MIN													
HOT AIR STERILIZING	170 ± 10° C													

COMMENTS:	**Please remember to verify thermometers against a NIST certified thermometer within 12 months of the prior verification.**
PROBLEMS:	**None observed**

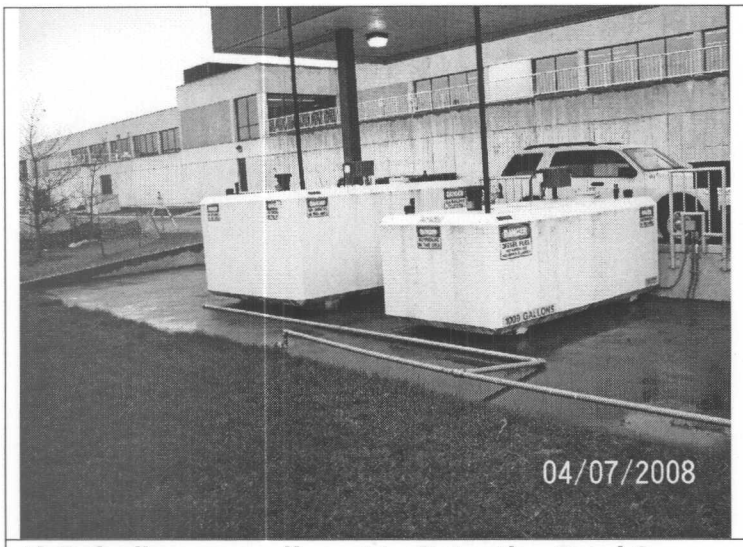
DEPARTMENT OF ENVIRONMENTAL QUALITY - WATER DIVISION
ANALYTICAL BALANCE CHECK SHEET
09/05

FACILITY NAME:	FWA – Corbalis	VPDES NO	VA0087874	DATE:	April 7, 2008

ANALYTICAL BALANCE 1			
SPECIFICATION/TYPE/USE: Mettler AT400			
QUESTION:	**YES**	**NO**	**DATE/COMMENT**
BALANCE SERVICED YEARLY? [SM1020 C.1; Permit]	**X**		**Mettler 02/08/08**
BALANCE LEVEL? [Permit]	**X**		
BALANCE ZEROED BEFORE USE? [Permit]	**X**		
BALANCE OPERATED PROPERLY? [Mfr.]	**X**		
BALANCE LOCATION APPROPRIATE? [Permit]	**X**		
BALANCE CHECKED DAILY WITH 2 CERTIFIED WEIGHTS? [SM1020; Permit]	**X**		
CLASS 1-2 WEIGHTS RECERTIFIED YEARLY? [NIST]	**X**		**11/06/07 (Ultra class)**
BALANCE SURFACES CLEAN? [Permit]	**X**		
ANALYTICAL BALANCE 2			
SPECIFICATION/TYPE/USE:			
QUESTION:	**YES**	**NO**	**DATE/COMMENT**
BALANCE SERVICED YEARLY?			
BALANCE LEVEL?			
BALANCE ZEROED BEFORE USE?			
BALANCE OPERATED PROPERLY?			
BALANCE LOCATION APPROPRIATE?			
BALANCE CHECKED DAILY WITH 2 CERTIFIED WEIGHTS?			
CLASS 1-2 WEIGHTS RECERTIFIED YEARLY?			
BALANCE SURFACES CLEAN?			

DEQ BALANCE CHECK:				DEQ BALANCE CHECK			
DEQ 10 gm Wt.	**Weight: 10.0003**	**DEQ 0.001 gm Wt.**	**Weight:**				
DEQ 1 gm Wt.	**Weight: 1.0000**						

Problems: No problems observed.



1) Refueling area adjacent to Detention Pond C.

2) Detention Pond C.

3) Detention Pond B.

4) Trash observed along Pond B banks.

5) Battery found outdoors near solids pad.

6) Outfall 002.

Facility Name: FWA – Corbalis
Photos by: Terry Nelson
Layout by: Terry Nelson

VPDES Permit No. VA0087874
April 7, 2008

VIRGINIA AQUATIC RESOURCES TRUST FUND PAYMENT ESTIMATE/VOUCHER (March 2007)

THIS VOUCHER MUST ACCOMPANY ALL TRUST FUND PAYMENTS

Permit Issuance Date (if applicable)	

Non-Tidal Wetland Impacts in Acres and Payment Amount (add rows as necessary)

Project #	Applicant	Locality	Impacts (ac)	Cowardin	HUC	Payment Amt	Est Date	Basin	Acres Req	$ Per Ac
						$0.00				

Stream Impacts in Linear Feet and Total Credits Required (add rows as necessary)

Project #	Applicant	Locality	Impacts (lf)	Cowardin	HUC	Payment Amt	Est Date	Basin	$ Per Credit	Total CR
04-1214	Tricord, Inc	Caroline	115	R4	2080105	$87,000.00	10/15/2008	York	600	145

Tidal Wetland Impacts in Acres and Payment Amount (add rows as necessary)

Project #	Applicant	Locality	Impacts (ac)	Cowardin	HUC	Payment Amt	Est Date	Basin	Acres Req	$ Per Ac

Name of USACE Project Manager	Name of Va DEQ/DOT Project Manager	Total Payment
Mr. Hal Wiggins	Ms. Amy Dooley	$87,000.00

APPLICANT CONTACT INFORMATION: To Be Completed by Applicant or Agent

Applicant's Point of Contact	Address	Phone No.

1. Payments will not be processed unless all information is included. TNC will notify applicants and the Corps when funds are deposited. **APPLICANTS ARE RESPONSIBLE FOR COMPLETING THE CONTACT INFORMATION.**

2. TNC has indicated that Trust Fund payments are not tax deductible donations.

3. **If the impact or contribution amounts change, the project must be re-coordinated with the Project Manager at the Norfolk District Corps' office.**

4. **The payment amount above expires one year from the estimate date, beyond which a new amount must be obtained.**

5. The highest payment amount required from either DEQ or the Corps should be submitted. Only one voucher is required.

6. Make checks payable to the Virginia Aquatic Resources Trust Fund and mail the check AND the completed voucher to:

   Ms. Linda Crowe
   The Nature Conservancy of Virginia
   490 Westfield Road
   Charlottesville, Virginia 22901

   Thank you for your cooperation and participation.

7. **Branch Policy is that you cut and paste the text below into all Corps' permits. (Double click to access text)**

In lieu of other mitigation options, you proposed use of the Virginia Aquatic Resources Trust Fund ("Fund") to satisfy the conditions of this permit. Although the Corps and Va DEQ may require different amounts, the higher amount will satisfy both permits. The required payment is $87,000.00, which was calculated based on prevailing mitigation ratios and market costs of comparable mitigation projects in the watershed. (The Fund is intended to work efficiently, so the final mitigation realized from this contribution may yield higher than normal ratios.) This payment amount expires on October 15, 2009. If payment is made before the expiration date, a new payment amount is not required; but is required after the expiration date regardless of the permit date or work commencement. Expirations allow us to adjust for changes to market forces and costs. **This permit is conditioned that you submit the payment amount (with a voucher) to the Virginia Aquatic Resources Trust Fund, c/o The Nature Conservancy of Virginia, Ms. Linda Crowe, 490 Westfield Road, Charlottesville, VA 22901. If the Nature Conservancy declines the payment, you must satisfy the mi**

FRESHWATER
WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: Corbalis WTP Permit No.: VA0087874

Receiving Stream: UT of Sugarland Run, Sugarland Run Version: OWP Guidance Memo 00-2011 (8/24/00)

Stream Information		Stream Flows		Mixing Information		Effluent Information	
Mean Hardness (as CaCO3) =	mg/L	1Q10 (Annual) =	0 MGD	Annual - 1Q10 Mix =	100 %	Mean Hardness (as CaCO3) =	92 mg/L
90% Temperature (Annual) =	deg C	7Q10 (Annual) =	0 MGD	- 7Q10 Mix =	100 %	90% Temp (Annual) =	23 deg C
90% Temperature (Wet season) =	deg C	30Q10 (Annual) =	0 MGD	- 30Q10 Mix =	100 %	90% Temp (Wet season) =	deg C
90% Maximum pH =	SU	1Q10 (Wet season) =	0 MGD	Wet Season - 1Q10 Mix =	100 %	90% Maximum pH =	7.9 SU
10% Maximum pH =	SU	30Q10 (Wet season)	0 MGD	- 30Q10 Mix =	100 %	10% Maximum pH =	SU
Tier Designation (1 or 2) =	1	30Q5 =	0 MGD			Discharge Flow =	0.1 MGD
Public Water Supply (PWS) Y/N? =	n	Harmonic Mean =	0 MGD				
Trout Present Y/N? =	n	Annual Average =	0 MGD				
Early Life Stages Present Y/N? =	y						

Parameter	Background	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				**Most Limiting Allocations**			
(ug/l unless noted)	Conc.	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	**Acute**	**Chronic**	**HH (PWS)**	**HH**
Acenapthene	0	--	--	na	2.7E+03	--	--	na	2.7E+03	--	--	--	--	--	--	--	--	--	--	na	**2.7E+03**
Acrolein	0	--	--	na	7.8E+02	--	--	na	7.8E+02	--	--	--	--	--	--	--	--	--	--	na	**7.8E+02**
Acrylonitrile[C]	0	--	--	na	6.6E+00	--	--	na	6.6E+00	--	--	--	--	--	--	--	--	--	--	na	**6.6E+00**
Aldrin [C]	0	3.0E+00	--	na	1.4E-03	3.0E+00	--	na	1.4E-03	--	--	--	--	--	--	--	--	**3.0E+00**	--	na	**1.4E-03**
Ammonia-N (mg/l) (Yearly)	0	1.01E+01	1.62E+00	na	--	1.0E+01	1.6E+00	na	--	--	--	--	--	--	--	--	--	**1.0E+01**	**1.6E+00**	na	--
Ammonia-N (mg/l) (High Flow)	0	1.01E+01	2.80E+00	na	--	1.0E+01	2.8E+00	na	--	--	--	--	--	--	--	--	--	**1.0E+01**	**2.8E+00**	na	--
Anthracene	0	--	--	na	1.1E+05	--	--	na	1.1E+05	--	--	--	--	--	--	--	--	--	--	na	**1.1E+05**
Antimony	0	--	--	na	4.3E+03	--	--	na	4.3E+03	--	--	--	--	--	--	--	--	--	--	na	**4.3E+03**
Arsenic	o	3.4E+02	1.5E+02	na	--	3.4E+02	1.5E+02	na	--	--	--	--	--	--	--	--	--	**3.4E+02**	**1.5E+02**	na	--
Barium	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Benzene [C]	0	--	--	na	7.1E+02	--	--	na	7.1E+02	--	--	--	--	--	--	--	--	--	--	na	**7.1E+02**
Benzidine[C]	0	--	--	na	5.4E-03	--	--	na	5.4E-03	--	--	--	--	--	--	--	--	--	--	na	**5.4E-03**
Benzo (a) anthracene [C]	0	--	--	na	4.9E-01	--	--	na	4.9E-01	--	--	--	--	--	--	--	--	--	--	na	**4.9E-01**
Benzo (b) fluoranthene [C]	0	--	--	na	4.9E-01	--	--	na	4.9E-01	--	--	--	--	--	--	--	--	--	--	na	**4.9E-01**
Benzo (k) fluoranthene [C]	0	--	--	na	4.9E-01	--	--	na	4.9E-01	--	--	--	--	--	--	--	--	--	--	na	**4.9E-01**
Benzo (a) pyrene [C]	0	--	--	na	4.9E-01	--	--	na	4.9E-01	--	--	--	--	--	--	--	--	--	--	na	**4.9E-01**
Bis2-Chloroethyl Ether	0	--	--	na	1.4E+01	--	--	na	1.4E+01	--	--	--	--	--	--	--	--	--	--	na	**1.4E+01**
Bis2-Chloroisopropyl Ether	0	--	--	na	1.7E+05	--	--	na	1.7E+05	--	--	--	--	--	--	--	--	--	--	na	**1.7E+05**
Bromoform [C]	0	--	--	na	3.6E+03	--	--	na	3.6E+03	--	--	--	--	--	--	--	--	--	--	na	**3.6E+03**
Butylbenzylphthalate	0	--	--	na	5.2E+03	--	--	na	5.2E+03	--	--	--	--	--	--	--	--	--	--	na	**5.2E+03**
Cadmium	0	3.6E+00	1.1E+00	na	--	3.6E+00	1.1E+00	na	--	--	--	--	--	--	--	--	--	**3.6E+00**	**1.1E+00**	na	--
Carbon Tetrachloride [C]	0	--	--	na	4.4E+01	--	--	na	4.4E+01	--	--	--	--	--	--	--	--	--	--	na	**4.4E+01**
Chlordane [C]	0	2.4E+00	4.3E-03	na	2.2E-02	2.4E+00	4.3E-03	na	2.2E-02	--	--	--	--	--	--	--	--	**2.4E+00**	**4.3E-03**	na	**2.2E-02**
Chloride	0	8.6E+05	2.3E+05	na	--	8.6E+05	2.3E+05	na	--	--	--	--	--	--	--	--	--	**8.6E+05**	**2.3E+05**	na	--
TRC	0	1.9E+01	1.1E+01	na	--	1.9E+01	1.1E+01	na	--	--	--	--	--	--	--	--	--	**1.9E+01**	**1.1E+01**	na	--
Chlorobenzene	0	--	--	na	2.1E+04	--	--	na	2.1E+04	--	--	--	--	--	--	--	--	--	--	na	**2.1E+04**

Attachment 7

Parameter	Background	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
(ug/l unless noted)	Conc.	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Chlorodibromomethane[C]	0	--	--	na	3.4E+02	--	--	na	3.4E+02	--	--	--	--	--	--	--	--	--	--	na	3.4E+02
Chloroform [C]	0	--	--	na	2.9E+04	--	--	na	2.9E+04	--	--	--	--	--	--	--	--	--	--	na	2.9E+04
2-Chloronaphthalene	0	--	--	na	4.3E+03	--	--	na	4.3E+03	--	--	--	--	--	--	--	--	--	--	na	4.3E+03
2-Chlorophenol	0	--	--	na	4.0E+02	--	--	na	4.0E+02	--	--	--	--	--	--	--	--	--	--	na	4.0E+02
Chlorpyrifos	0	8.3E-02	4.1E-02	na	--	8.3E-02	4.1E-02	na	--	--	--	--	--	--	--	--	--	8.3E-02	4.1E-02	na	--
Chromium III	0	5.3E+02	6.9E+01	na	--	5.3E+02	6.9E+01	na	--	--	--	--	--	--	--	--	--	5.3E+02	6.9E+01	na	--
Chromium VI	0	1.6E+01	1.1E+01	na	--	1.6E+01	1.1E+01	na	--	--	--	--	--	--	--	--	--	1.6E+01	1.1E+01	na	--
Chromium, Total	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Chrysene [C]	0	--	--	na	4.9E-01	--	--	na	4.9E-01	--	--	--	--	--	--	--	--	--	--	na	4.9E-01
Copper	0	1.2E+01	8.3E+00	na	--	1.2E+01	8.3E+00	na	--	--	--	--	--	--	--	--	--	1.2E+01	8.3E+00	na	--
Cyanide	0	2.2E+01	5.2E+00	na	2.2E+05	2.2E+01	5.2E+00	na	2.2E+05	--	--	--	--	--	--	--	--	2.2E+01	5.2E+00	na	2.2E+05
DDD [C]	0	--	--	na	8.4E-03	--	--	na	8.4E-03	--	--	--	--	--	--	--	--	--	--	na	8.4E-03
DDE [C]	0	--	--	na	5.9E-03	--	--	na	5.9E-03	--	--	--	--	--	--	--	--	--	--	na	5.9E-03
DDT [C]	0	1.1E+00	1.0E-03	na	5.9E-03	1.1E+00	1.0E-03	na	5.9E-03	--	--	--	--	--	--	--	--	1.1E+00	1.0E-03	na	5.9E-03
Demeton	0	--	1.0E-01	na	--	--	1.0E-01	na	--	--	--	--	--	--	--	--	--	--	1.0E-01	na	--
Dibenz(a,h)anthracene [C]	0	--	--	na	4.9E-01	--	--	na	4.9E-01	--	--	--	--	--	--	--	--	--	--	na	4.9E-01
Dibutyl phthalate	0	--	--	na	1.2E+04	--	--	na	1.2E+04	--	--	--	--	--	--	--	--	--	--	na	1.2E+04
Dichloromethane (Methylene Chloride) [C]	0	--	--	na	1.6E+04	--	--	na	1.6E+04	--	--	--	--	--	--	--	--	--	--	na	1.6E+04
1,2-Dichlorobenzene	0	--	--	na	1.7E+04	--	--	na	1.7E+04	--	--	--	--	--	--	--	--	--	--	na	1.7E+04
1,3-Dichlorobenzene	0	--	--	na	2.6E+03	--	--	na	2.6E+03	--	--	--	--	--	--	--	--	--	--	na	2.6E+03
1,4-Dichlorobenzene	0	--	--	na	2.6E+03	--	--	na	2.6E+03	--	--	--	--	--	--	--	--	--	--	na	2.6E+03
3,3-Dichlorobenzidine[C]	0	--	--	na	7.7E-01	--	--	na	7.7E-01	--	--	--	--	--	--	--	--	--	--	na	7.7E-01
Dichlorobromomethane [C]	0	--	--	na	4.6E+02	--	--	na	4.6E+02	--	--	--	--	--	--	--	--	--	--	na	4.6E+02
1,2-Dichloroethane [C]	0	--	--	na	9.9E+02	--	--	na	9.9E+02	--	--	--	--	--	--	--	--	--	--	na	9.9E+02
1,1-Dichloroethylene	0	--	--	na	1.7E+04	--	--	na	1.7E+04	--	--	--	--	--	--	--	--	--	--	na	1.7E+04
1,2-trans-dichloroethylene	0	--	--	na	1.4E+05	--	--	na	1.4E+05	--	--	--	--	--	--	--	--	--	--	na	1.4E+05
2,4-Dichlorophenol	0	--	--	na	7.9E+02	--	--	na	7.9E+02	--	--	--	--	--	--	--	--	--	--	na	7.9E+02
2,4-Dichlorophenoxy acetic acid (2,4-D)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
1,2-Dichloropropane[C]	0	--	--	na	3.9E+02	--	--	na	3.9E+02	--	--	--	--	--	--	--	--	--	--	na	3.9E+02
1,3-Dichloropropene	0	--	--	na	1.7E+03	--	--	na	1.7E+03	--	--	--	--	--	--	--	--	--	--	na	1.7E+03
Dieldrin [C]	0	2.4E-01	5.6E-02	na	1.4E-03	2.4E-01	5.6E-02	na	1.4E-03	--	--	--	--	--	--	--	--	2.4E-01	5.6E-02	na	1.4E-03
Diethyl Phthalate	0	--	--	na	1.2E+05	--	--	na	1.2E+05	--	--	--	--	--	--	--	--	--	--	na	1.2E+05
Di-2-Ethylhexyl Phthalate [C]	0	--	--	na	5.9E+01	--	--	na	5.9E+01	--	--	--	--	--	--	--	--	--	--	na	5.9E+01
2,4-Dimethylphenol	0	--	--	na	2.3E+03	--	--	na	2.3E+03	--	--	--	--	--	--	--	--	--	--	na	2.3E+03
Dimethyl Phthalate	0	--	--	na	2.9E+06	--	--	na	2.9E+06	--	--	--	--	--	--	--	--	--	--	na	2.9E+06
Di-n-Butyl Phthalate	0	--	--	na	1.2E+04	--	--	na	1.2E+04	--	--	--	--	--	--	--	--	--	--	na	1.2E+04
2,4 Dinitrophenol	0	--	--	na	1.4E+04	--	--	na	1.4E+04	--	--	--	--	--	--	--	--	--	--	na	1.4E+04
2-Methyl-4,6-Dinitrophenol	0	--	--	na	7.65E+02	--	--	na	7.7E+02	--	--	--	--	--	--	--	--	--	--	na	7.7E+02
2,4-Dinitrotoluene [C]	0	--	--	na	9.1E+01	--	--	na	9.1E+01	--	--	--	--	--	--	--	--	--	--	na	9.1E+01
Dioxin (2,3,7,8-tetrachlorodibenzo-p-dioxin) (ppq)	0	--	--	na	1.2E-06	--	--	na	na	--	--	--	--	--	--	--	--	--	--	na	na
1,2-Diphenylhydrazine[C]	0	--	--	na	5.4E+00	--	--	na	5.4E+00	--	--	--	--	--	--	--	--	--	--	na	5.4E+00
Alpha-Endosulfan	0	2.2E-01	5.6E-02	na	2.4E+02	2.2E-01	5.6E-02	na	2.4E+02	--	--	--	--	--	--	--	--	2.2E-01	5.6E-02	na	2.4E+02
Beta-Endosulfan	0	2.2E-01	5.6E-02	na	2.4E+02	2.2E-01	5.6E-02	na	2.4E+02	--	--	--	--	--	--	--	--	2.2E-01	5.6E-02	na	2.4E+02
Endosulfan Sulfate	0	--	--	na	2.4E+02	--	--	na	2.4E+02	--	--	--	--	--	--	--	--	--	--	na	2.4E+02
Endrin	0	8.6E-02	3.6E-02	na	8.1E-01	8.6E-02	3.6E-02	na	8.1E-01	--	--	--	--	--	--	--	--	8.6E-02	3.6E-02	na	8.1E-01
Endrin Aldehyde	0	--	--	na	8.1E-01	--	--	na	8.1E-01	--	--	--	--	--	--	--	--	--	--	na	8.1E-01

Parameter	Background	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
(ug/l unless noted)	Conc.	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Ethylbenzene	0	--	--	na	2.9E+04	--	--	na	2.9E+04	--	--	--	--	--	--	--	--	--	--	na	2.9E+04
Fluoranthene	0	--	--	na	3.7E+02	--	--	na	3.7E+02	--	--	--	--	--	--	--	--	--	--	na	3.7E+02
Fluorene	0	--	--	na	1.4E+04	--	--	na	1.4E+04	--	--	--	--	--	--	--	--	--	--	na	1.4E+04
Foaming Agents	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Guthion	0	--	1.0E-02	na	--	--	1.0E-02	na	--	--	--	--	--	--	--	--	--	--	1.0E-02	na	--
Heptachlor [c]	0	5.2E-01	3.8E-03	na	2.1E-03	5.2E-01	3.8E-03	na	2.1E-03	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	na	2.1E-03
Heptachlor Epoxide[c]	0	5.2E-01	3.8E-03	na	1.1E-03	5.2E-01	3.8E-03	na	1.1E-03	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	na	1.1E-03
Hexachlorobenzene[c]	0	--	--	na	7.7E-03	--	--	na	7.7E-03	--	--	--	--	--	--	--	--	--	--	na	7.7E-03
Hexachlorobutadiene[c]	0	--	--	na	5.0E+02	--	--	na	5.0E+02	--	--	--	--	--	--	--	--	--	--	na	5.0E+02
Hexachlorocyclohexane Alpha-BHC[c]	0	--	--	na	1.3E-01	--	--	na	1.3E-01	--	--	--	--	--	--	--	--	--	--	na	1.3E-01
Hexachlorocyclohexane Beta-BHC[c]	0	--	--	na	4.6E-01	--	--	na	4.6E-01	--	--	--	--	--	--	--	--	--	--	na	4.6E-01
Hexachlorocyclohexane Gamma-BHC[c] (Lindane)	0	9.5E-01	na	na	6.3E-01	9.5E-01	--	na	6.3E-01	--	--	--	--	--	--	--	--	9.5E-01	--	na	6.3E-01
Hexachlorocyclopentadiene	0	--	--	na	1.7E+04	--	--	na	1.7E+04	--	--	--	--	--	--	--	--	--	--	na	1.7E+04
Hexachloroethane[c]	0	--	--	na	8.9E+01	--	--	na	8.9E+01	--	--	--	--	--	--	--	--	--	--	na	8.9E+01
Hydrogen Sulfide	0	--	2.0E+00	na	--	--	2.0E+00	na	--	--	--	--	--	--	--	--	--	--	2.0E+00	na	--
Indeno (1,2,3-cd) pyrene [c]	0	--	--	na	4.9E-01	--	--	na	4.9E-01	--	--	--	--	--	--	--	--	--	--	na	4.9E-01
Iron	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Isophorone[c]	0	--	--	na	2.6E+04	--	--	na	2.6E+04	--	--	--	--	--	--	--	--	--	--	na	2.6E+04
Kepone	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	--	--	--	--	--	--	--	--	0.0E+00	na	--
Lead	0	1.1E+02	1.2E+01	na	--	1.1E+02	1.2E+01	na	--	--	--	--	--	--	--	--	--	1.1E+02	1.2E+01	na	--
Malathion	0	--	1.0E-01	na	--	--	1.0E-01	na	--	--	--	--	--	--	--	--	--	--	1.0E-01	na	--
Manganese	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Mercury	0	1.4E+00	7.7E-01	na	5.1E-02	1.4E+00	7.7E-01	na	5.1E-02	--	--	--	--	--	--	--	--	1.4E+00	7.7E-01	na	5.1E-02
Methyl Bromide	0	--	--	na	4.0E+03	--	--	na	4.0E+03	--	--	--	--	--	--	--	--	--	--	na	4.0E+03
Methoxychlor	0	--	3.0E-02	na	--	--	3.0E-02	na	--	--	--	--	--	--	--	--	--	--	3.0E-02	na	--
Mirex	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	--	--	--	--	--	--	--	--	0.0E+00	na	--
Monochlorobenzene	0	--	--	na	2.1E+04	--	--	na	2.1E+04	--	--	--	--	--	--	--	--	--	--	na	2.1E+04
Nickel	0	1.7E+02	1.9E+01	na	4.6E+03	1.7E+02	1.9E+01	na	4.6E+03	--	--	--	--	--	--	--	--	1.7E+02	1.9E+01	na	4.6E+03
Nitrate (as N)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Nitrobenzene	0	--	--	na	1.9E+03	--	--	na	1.9E+03	--	--	--	--	--	--	--	--	--	--	na	1.9E+03
N-Nitrosodimethylamine[c]	0	--	--	na	8.1E+01	--	--	na	8.1E+01	--	--	--	--	--	--	--	--	--	--	na	8.1E+01
N-Nitrosodiphenylamine[c]	0	--	--	na	1.6E+02	--	--	na	1.6E+02	--	--	--	--	--	--	--	--	--	--	na	1.6E+02
N-Nitrosodi-n-propylamine[c]	0	--	--	na	1.4E+01	--	--	na	1.4E+01	--	--	--	--	--	--	--	--	--	--	na	1.4E+01
Parathion	0	6.5E-02	1.3E-02	na	--	6.5E-02	1.3E-02	na	--	--	--	--	--	--	--	--	--	6.5E-02	1.3E-02	na	--
PCB-1016	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1221	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1232	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1242	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1248	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1254	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1260	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB Total[c]	0	--	--	na	1.7E-03	--	--	na	1.7E-03	--	--	--	--	--	--	--	--	--	--	na	1.7E-03

Parameter	Background	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
(ug/l unless noted)	Conc.	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	**Acute**	**Chronic**	**HH (PWS)**	**HH**
Pentachlorophenol [C]	0	7.7E-03	5.9E-03	na	8.2E+01	7.7E-03	5.9E-03	na	8.2E+01	--	--	--	--	--	--	--	--	**7.7E-03**	**5.9E-03**	**na**	**8.2E+01**
Phenol	0	--	--	na	4.6E+06	--	--	na	4.6E+06	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**4.6E+06**
Pyrene	0	--	--	na	1.1E+04	--	--	na	1.1E+04	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**1.1E+04**
Radionuclides (pCi/l except Beta/Photon)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**--**
Gross Alpha Activity	0	--	--	na	1.5E+01	--	--	na	1.5E+01	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**1.5E+01**
Beta and Photon Activity (mrem/yr)	0	--	--	na	4.0E+00	--	--	na	4.0E+00	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**4.0E+00**
Strontium-90	0	--	--	na	8.0E+00	--	--	na	8.0E+00	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**8.0E+00**
Tritium	0	--	--	na	2.0E+04	--	--	na	2.0E+04	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**2.0E+04**
Selenium	0	2.0E+01	5.0E+00	na	1.1E+04	2.0E+01	5.0E+00	na	1.1E+04	--	--	--	--	--	--	--	--	**2.0E+01**	**5.0E+00**	**na**	**1.1E+04**
Silver	0	3.0E+00	--	na	--	3.0E+00	--	na	--	--	--	--	--	--	--	--	--	**3.0E+00**	**--**	**na**	**--**
Sulfate	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**--**
1,1,2,2-Tetrachloroethane[C]	0	--	--	na	1.1E+02	--	--	na	1.1E+02	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**1.1E+02**
Tetrachloroethylene[C]	0	--	--	na	8.9E+01	--	--	na	8.9E+01	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**8.9E+01**
Thallium	0	--	--	na	6.3E+00	--	--	na	6.3E+00	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**6.3E+00**
Toluene	0	--	--	na	2.0E+05	--	--	na	2.0E+05	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**2.0E+05**
Total dissolved solids	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**--**
Toxaphene [C]	0	7.3E-01	2.0E-04	na	7.5E-03	7.3E-01	2.0E-04	na	7.5E-03	--	--	--	--	--	--	--	--	**7.3E-01**	**2.0E-04**	**na**	**7.5E-03**
Tributyltin	0	4.6E-01	6.3E-02	na	--	4.6E-01	6.3E-02	na	--	--	--	--	--	--	--	--	--	**4.6E-01**	**6.3E-02**	**na**	**--**
1,2,4-Trichlorobenzene	0	--	--	na	9.4E+02	--	--	na	9.4E+02	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**9.4E+02**
1,1,2-Trichloroethane[C]	0	--	--	na	4.2E+02	--	--	na	4.2E+02	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**4.2E+02**
Trichloroethylene [C]	0	--	--	na	8.1E+02	--	--	na	8.1E+02	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**8.1E+02**
2,4,6-Trichlorophenol [C]	0	--	--	na	6.5E+01	--	--	na	6.5E+01	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**6.5E+01**
2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**--**
Vinyl Chloride[C]	0	--	--	na	6.1E+01	--	--	na	6.1E+01	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**6.1E+01**
Zinc	0	1.1E+02	1.1E+02	na	6.9E+04	1.1E+02	1.1E+02	na	6.9E+04	--	--	--	--	--	--	--	--	**1.1E+02**	**1.1E+02**	**na**	**6.9E+04**

Notes:

1. All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise
2. Discharge flow is highest monthly average or Form 2C maximum for Industries and design flow for Municipals
3. Metals measured as Dissolved, unless specified otherwise
4. "C" indicates a carcinogenic parameter
5. Regular WLAs are mass balances (minus background concentration) using the % of stream flow entered above under Mixing Information.
   Antidegradation WLAs are based upon a complete mix.
6. Antideg. Baseline = (0.25(WQC - background conc.) + background conc.) for acute and chronic
   = (0.1(WQC - background conc.) + background conc.) for human health
7. WLAs established at the following stream flows: 1Q10 for Acute, 30Q10 for Chronic Ammonia, 7Q10 for Other Chronic, 30Q5 for Non-carcinogens, Harmonic Mean for Carcinogens, and Annual Average for Dioxin. Mixing ratios may be substituted for stream flows where appropriate.

Metal	Target Value (SSTV)
Antimony	4.3E+03
Arsenic	9.0E+01
Barium	na
Cadmium	6.4E-01
Chromium III	4.2E+01
Chromium VI	6.4E+00
Copper	5.0E+00
Iron	na
Lead	7.3E+00
Manganese	na
Mercury	5.1E-02
Nickel	1.1E+01
Selenium	3.0E+00
Silver	1.2E+00
Zinc	4.4E+01

Note: do not use QL's lower than the minimum QL's provided in agency guidance

FRESHWATER
WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: Corbalis WTP Permit No.: VA0087874

Receiving Stream: Old Sugarland Run Version: OWP Guidance Memo 00-2011 (8/24/00)

Stream Information		Stream Flows		Mixing Information		Effluent Information	
Mean Hardness (as CaCO3) =	mg/L	1Q10 (Annual) =	0 MGD	Annual - 1Q10 Mix =	100 %	Mean Hardness (as CaCO3) =	92 mg/L
90% Temperature (Annual) =	deg C	7Q10 (Annual) =	0 MGD	- 7Q10 Mix =	100 %	90% Temp (Annual) =	23 deg C
90% Temperature (Wet season) =	deg C	30Q10 (Annual) =	0 MGD	- 30Q10 Mix =	100 %	90% Temp (Wet season) =	deg C
90% Maximum pH =	SU	1Q10 (Wet season) =	0 MGD	Wet Season - 1Q10 Mix =	100 %	90% Maximum pH =	7.9 SU
10% Maximum pH =	SU	30Q10 (Wet season)	0 MGD	- 30Q10 Mix =	100 %	10% Maximum pH =	SU
Tier Designation (1 or 2) =	1	30Q5 =	0 MGD			Discharge Flow =	0.1 MGD
Public Water Supply (PWS) Y/N? =	n	Harmonic Mean =	0 MGD				
Trout Present Y/N? =	n	Annual Average =	0 MGD				
Early Life Stages Present Y/N? =	y						

Parameter	Background	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
(ug/l unless noted)	Conc.	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Acenapthene	0	--	--	na	2.7E+03	--	--	na	2.7E+03	--	--	--	--	--	--	--	--	--	--	na	2.7E+03
Acrolein	0	--	--	na	7.8E+02	--	--	na	7.8E+02	--	--	--	--	--	--	--	--	--	--	na	7.8E+02
Acrylonitrile[C]	0	--	--	na	6.6E+00	--	--	na	6.6E+00	--	--	--	--	--	--	--	--	--	--	na	6.6E+00
Aldrin [C]	0	3.0E+00	--	na	1.4E-03	3.0E+00	--	na	1.4E-03	--	--	--	--	--	--	--	--	3.0E+00	--	na	1.4E-03
Ammonia-N (mg/l) (Yearly)	0	1.01E+01	1.62E+00	na	--	1.0E+01	1.6E+00	na	--	--	--	--	--	--	--	--	--	1.0E+01	1.6E+00	na	--
Ammonia-N (mg/l) (High Flow)	0	1.01E+01	2.80E+00	na	--	1.0E+01	2.8E+00	na	--	--	--	--	--	--	--	--	--	1.0E+01	2.8E+00	na	--
Anthracene	0	--	--	na	1.1E+05	--	--	na	1.1E+05	--	--	--	--	--	--	--	--	--	--	na	1.1E+05
Antimony	0	--	--	na	4.3E+03	--	--	na	4.3E+03	--	--	--	--	--	--	--	--	--	--	na	4.3E+03
Arsenic	o	3.4E+02	1.5E+02	na	--	3.4E+02	1.5E+02	na	--	--	--	--	--	--	--	--	--	3.4E+02	1.5E+02	na	--
Barium	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Benzene [C]	0	--	--	na	7.1E+02	--	--	na	7.1E+02	--	--	--	--	--	--	--	--	--	--	na	7.1E+02
Benzidine[C]	0	--	--	na	5.4E-03	--	--	na	5.4E-03	--	--	--	--	--	--	--	--	--	--	na	5.4E-03
Benzo (a) anthracene [C]	0	--	--	na	4.9E-01	--	--	na	4.9E-01	--	--	--	--	--	--	--	--	--	--	na	4.9E-01
Benzo (b) fluoranthene [C]	0	--	--	na	4.9E-01	--	--	na	4.9E-01	--	--	--	--	--	--	--	--	--	--	na	4.9E-01
Benzo (k) fluoranthene [C]	0	--	--	na	4.9E-01	--	--	na	4.9E-01	--	--	--	--	--	--	--	--	--	--	na	4.9E-01
Benzo (a) pyrene [C]	0	--	--	na	4.9E-01	--	--	na	4.9E-01	--	--	--	--	--	--	--	--	--	--	na	4.9E-01
Bis2-Chloroethyl Ether	0	--	--	na	1.4E+01	--	--	na	1.4E+01	--	--	--	--	--	--	--	--	--	--	na	1.4E+01
Bis2-Chloroisopropyl Ether	0	--	--	na	1.7E+05	--	--	na	1.7E+05	--	--	--	--	--	--	--	--	--	--	na	1.7E+05
Bromoform [C]	0	--	--	na	3.6E+03	--	--	na	3.6E+03	--	--	--	--	--	--	--	--	--	--	na	3.6E+03
Butylbenzylphthalate	0	--	--	na	5.2E+03	--	--	na	5.2E+03	--	--	--	--	--	--	--	--	--	--	na	5.2E+03
Cadmium	0	3.6E+00	1.1E+00	na	--	3.6E+00	1.1E+00	na	--	--	--	--	--	--	--	--	--	3.6E+00	1.1E+00	na	--
Carbon Tetrachloride [C]	0	--	--	na	4.4E+01	--	--	na	4.4E+01	--	--	--	--	--	--	--	--	--	--	na	4.4E+01
Chlordane [C]	0	2.4E+00	4.3E-03	na	2.2E-02	2.4E+00	4.3E-03	na	2.2E-02	--	--	--	--	--	--	--	--	2.4E+00	4.3E-03	na	2.2E-02
Chloride	0	8.6E+05	2.3E+05	na	--	8.6E+05	2.3E+05	na	--	--	--	--	--	--	--	--	--	8.6E+05	2.3E+05	na	--
TRC	0	1.9E+01	1.1E+01	na	--	1.9E+01	1.1E+01	na	--	--	--	--	--	--	--	--	--	1.9E+01	1.1E+01	na	--
Chlorobenzene	0	--	--	na	2.1E+04	--	--	na	2.1E+04	--	--	--	--	--	--	--	--	--	--	na	2.1E+04

Parameter	Background	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
(ug/l unless noted)	Conc.	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Chlorodibromomethane[C]	0	--	--	na	3.4E+02	--	--	na	3.4E+02	--	--	--	--	--	--	--	--	--	--	na	3.4E+02
Chloroform [C]	0	--	--	na	2.9E+04	--	--	na	2.9E+04	--	--	--	--	--	--	--	--	--	--	na	2.9E+04
2-Chloronaphthalene	0	--	--	na	4.3E+03	--	--	na	4.3E+03	--	--	--	--	--	--	--	--	--	--	na	4.3E+03
2-Chlorophenol	0	--	--	na	4.0E+02	--	--	na	4.0E+02	--	--	--	--	--	--	--	--	--	--	na	4.0E+02
Chlorpyrifos	0	8.3E-02	4.1E-02	na	--	8.3E-02	4.1E-02	na	--	--	--	--	--	--	--	--	--	8.3E-02	4.1E-02	na	--
Chromium III	0	5.3E+02	6.9E+01	na	--	5.3E+02	6.9E+01	na	--	--	--	--	--	--	--	--	--	5.3E+02	6.9E+01	na	--
Chromium VI	0	1.6E+01	1.1E+01	na	--	1.6E+01	1.1E+01	na	--	--	--	--	--	--	--	--	--	1.6E+01	1.1E+01	na	--
Chromium, Total	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Chrysene [C]	0	--	--	na	4.9E-01	--	--	na	4.9E-01	--	--	--	--	--	--	--	--	--	--	na	4.9E-01
Copper	0	1.2E+01	8.3E+00	na	--	1.2E+01	8.3E+00	na	--	--	--	--	--	--	--	--	--	1.2E+01	8.3E+00	na	--
Cyanide	0	2.2E+01	5.2E+00	na	2.2E+05	2.2E+01	5.2E+00	na	2.2E+05	--	--	--	--	--	--	--	--	2.2E+01	5.2E+00	na	2.2E+05
DDD [C]	0	--	--	na	8.4E-03	--	--	na	8.4E-03	--	--	--	--	--	--	--	--	--	--	na	8.4E-03
DDE [C]	0	--	--	na	5.9E-03	--	--	na	5.9E-03	--	--	--	--	--	--	--	--	--	--	na	5.9E-03
DDT [C]	0	1.1E+00	1.0E-03	na	5.9E-03	1.1E+00	1.0E-03	na	5.9E-03	--	--	--	--	--	--	--	--	1.1E+00	1.0E-03	na	5.9E-03
Demeton	0	--	1.0E-01	na	--	--	1.0E-01	na	--	--	--	--	--	--	--	--	--	--	1.0E-01	na	--
Dibenz(a,h)anthracene [C]	0	--	--	na	4.9E-01	--	--	na	4.9E-01	--	--	--	--	--	--	--	--	--	--	na	4.9E-01
Dibutyl phthalate	0	--	--	na	1.2E+04	--	--	na	1.2E+04	--	--	--	--	--	--	--	--	--	--	na	1.2E+04
Dichloromethane (Methylene Chloride) [C]	0	--	--	na	1.6E+04	--	--	na	1.6E+04	--	--	--	--	--	--	--	--	--	--	na	1.6E+04
1,2-Dichlorobenzene	0	--	--	na	1.7E+04	--	--	na	1.7E+04	--	--	--	--	--	--	--	--	--	--	na	1.7E+04
1,3-Dichlorobenzene	0	--	--	na	2.6E+03	--	--	na	2.6E+03	--	--	--	--	--	--	--	--	--	--	na	2.6E+03
1,4-Dichlorobenzene	0	--	--	na	2.6E+03	--	--	na	2.6E+03	--	--	--	--	--	--	--	--	--	--	na	2.6E+03
3,3-Dichlorobenzidine[C]	0	--	--	na	7.7E-01	--	--	na	7.7E-01	--	--	--	--	--	--	--	--	--	--	na	7.7E-01
Dichlorobromomethane [C]	0	--	--	na	4.6E+02	--	--	na	4.6E+02	--	--	--	--	--	--	--	--	--	--	na	4.6E+02
1,2-Dichloroethane [C]	0	--	--	na	9.9E+02	--	--	na	9.9E+02	--	--	--	--	--	--	--	--	--	--	na	9.9E+02
1,1-Dichloroethylene	0	--	--	na	1.7E+04	--	--	na	1.7E+04	--	--	--	--	--	--	--	--	--	--	na	1.7E+04
1,2-trans-dichloroethylene	0	--	--	na	1.4E+05	--	--	na	1.4E+05	--	--	--	--	--	--	--	--	--	--	na	1.4E+05
2,4-Dichlorophenol	0	--	--	na	7.9E+02	--	--	na	7.9E+02	--	--	--	--	--	--	--	--	--	--	na	7.9E+02
2,4-Dichlorophenoxy acetic acid (2,4-D)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
1,2-Dichloropropane[C]	0	--	--	na	3.9E+02	--	--	na	3.9E+02	--	--	--	--	--	--	--	--	--	--	na	3.9E+02
1,3-Dichloropropene	0	--	--	na	1.7E+03	--	--	na	1.7E+03	--	--	--	--	--	--	--	--	--	--	na	1.7E+03
Dieldrin [C]	0	2.4E-01	5.6E-02	na	1.4E-03	2.4E-01	5.6E-02	na	1.4E-03	--	--	--	--	--	--	--	--	2.4E-01	5.6E-02	na	1.4E-03
Diethyl Phthalate	0	--	--	na	1.2E+05	--	--	na	1.2E+05	--	--	--	--	--	--	--	--	--	--	na	1.2E+05
Di-2-Ethylhexyl Phthalate [C]	0	--	--	na	5.9E+01	--	--	na	5.9E+01	--	--	--	--	--	--	--	--	--	--	na	5.9E+01
2,4-Dimethylphenol	0	--	--	na	2.3E+03	--	--	na	2.3E+03	--	--	--	--	--	--	--	--	--	--	na	2.3E+03
Dimethyl Phthalate	0	--	--	na	2.9E+06	--	--	na	2.9E+06	--	--	--	--	--	--	--	--	--	--	na	2.9E+06
Di-n-Butyl Phthalate	0	--	--	na	1.2E+04	--	--	na	1.2E+04	--	--	--	--	--	--	--	--	--	--	na	1.2E+04
2,4 Dinitrophenol	0	--	--	na	1.4E+04	--	--	na	1.4E+04	--	--	--	--	--	--	--	--	--	--	na	1.4E+04
2-Methyl-4,6-Dinitrophenol	0	--	--	na	7.65E+02	--	--	na	7.7E+02	--	--	--	--	--	--	--	--	--	--	na	7.7E+02
2,4-Dinitrotoluene [C]	0	--	--	na	9.1E+01	--	--	na	9.1E+01	--	--	--	--	--	--	--	--	--	--	na	9.1E+01
Dioxin (2,3,7,8-tetrachlorodibenzo-p-dioxin) (ppq)	0	--	--	na	1.2E-06	--	--	na	na	--	--	--	--	--	--	--	--	--	--	na	na
1,2-Diphenylhydrazine[C]	0	--	--	na	5.4E+00	--	--	na	5.4E+00	--	--	--	--	--	--	--	--	--	--	na	5.4E+00
Alpha-Endosulfan	0	2.2E-01	5.6E-02	na	2.4E+02	2.2E-01	5.6E-02	na	2.4E+02	--	--	--	--	--	--	--	--	2.2E-01	5.6E-02	na	2.4E+02
Beta-Endosulfan	0	2.2E-01	5.6E-02	na	2.4E+02	2.2E-01	5.6E-02	na	2.4E+02	--	--	--	--	--	--	--	--	2.2E-01	5.6E-02	na	2.4E+02
Endosulfan Sulfate	0	--	--	na	2.4E+02	--	--	na	2.4E+02	--	--	--	--	--	--	--	--	--	--	na	2.4E+02
Endrin	0	8.6E-02	3.6E-02	na	8.1E-01	8.6E-02	3.6E-02	na	8.1E-01	--	--	--	--	--	--	--	--	8.6E-02	3.6E-02	na	8.1E-01
Endrin Aldehyde	0	--	--	na	8.1E-01	--	--	na	8.1E-01	--	--	--	--	--	--	--	--	--	--	na	8.1E-01

Parameter	Background	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				**Most Limiting Allocations**			
(ug/l unless noted)	Conc.	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	**Acute**	**Chronic**	**HH (PWS)**	**HH**
Ethylbenzene	0	--	--	na	2.9E+04	--	--	na	2.9E+04	--	--	--	--	--	--	--	--	--	--	na	2.9E+04
Fluoranthene	0	--	--	na	3.7E+02	--	--	na	3.7E+02	--	--	--	--	--	--	--	--	--	--	na	3.7E+02
Fluorene	0	--	--	na	1.4E+04	--	--	na	1.4E+04	--	--	--	--	--	--	--	--	--	--	na	1.4E+04
Foaming Agents	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Guthion	0	--	1.0E-02	na	--	--	1.0E-02	na	--	--	--	--	--	--	--	--	--	--	1.0E-02	na	--
Heptachlor [c]	0	5.2E-01	3.8E-03	na	2.1E-03	5.2E-01	3.8E-03	na	2.1E-03	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	na	2.1E-03
Heptachlor Epoxide[c]	0	5.2E-01	3.8E-03	na	1.1E-03	5.2E-01	3.8E-03	na	1.1E-03	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	na	1.1E-03
Hexachlorobenzene[c]	0	--	--	na	7.7E-03	--	--	na	7.7E-03	--	--	--	--	--	--	--	--	--	--	na	7.7E-03
Hexachlorobutadiene[c]	0	--	--	na	5.0E+02	--	--	na	5.0E+02	--	--	--	--	--	--	--	--	--	--	na	5.0E+02
Hexachlorocyclohexane Alpha-BHC[c]	0	--	--	na	1.3E-01	--	--	na	1.3E-01	--	--	--	--	--	--	--	--	--	--	na	1.3E-01
Hexachlorocyclohexane Beta-BHC[c]	0	--	--	na	4.6E-01	--	--	na	4.6E-01	--	--	--	--	--	--	--	--	--	--	na	4.6E-01
Hexachlorocyclohexane Gamma-BHC[c] (Lindane)	0	9.5E-01	na	na	6.3E-01	9.5E-01	--	na	6.3E-01	--	--	--	--	--	--	--	--	9.5E-01	--	na	6.3E-01
Hexachlorocyclopentadiene	0	--	--	na	1.7E+04	--	--	na	1.7E+04	--	--	--	--	--	--	--	--	--	--	na	1.7E+04
Hexachloroethane[c]	0	--	--	na	8.9E+01	--	--	na	8.9E+01	--	--	--	--	--	--	--	--	--	--	na	8.9E+01
Hydrogen Sulfide	0	--	2.0E+00	na	--	--	2.0E+00	na	--	--	--	--	--	--	--	--	--	--	2.0E+00	na	--
Indeno (1,2,3-cd) pyrene [c]	0	--	--	na	4.9E-01	--	--	na	4.9E-01	--	--	--	--	--	--	--	--	--	--	na	4.9E-01
Iron	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Isophorone[c]	0	--	--	na	2.6E+04	--	--	na	2.6E+04	--	--	--	--	--	--	--	--	--	--	na	2.6E+04
Kepone	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	--	--	--	--	--	--	--	--	0.0E+00	na	--
Lead	0	1.1E+02	1.2E+01	na	--	1.1E+02	1.2E+01	na	--	--	--	--	--	--	--	--	--	1.1E+02	1.2E+01	na	--
Malathion	0	--	1.0E-01	na	--	--	1.0E-01	na	--	--	--	--	--	--	--	--	--	--	1.0E-01	na	--
Manganese	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Mercury	0	1.4E+00	7.7E-01	na	5.1E-02	1.4E+00	7.7E-01	na	5.1E-02	--	--	--	--	--	--	--	--	1.4E+00	7.7E-01	na	5.1E-02
Methyl Bromide	0	--	--	na	4.0E+03	--	--	na	4.0E+03	--	--	--	--	--	--	--	--	--	--	na	4.0E+03
Methoxychlor	0	--	3.0E-02	na	--	--	3.0E-02	na	--	--	--	--	--	--	--	--	--	--	3.0E-02	na	--
Mirex	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	--	--	--	--	--	--	--	--	0.0E+00	na	--
Monochlorobenzene	0	--	--	na	2.1E+04	--	--	na	2.1E+04	--	--	--	--	--	--	--	--	--	--	na	2.1E+04
Nickel	0	1.7E+02	1.9E+01	na	4.6E+03	1.7E+02	1.9E+01	na	4.6E+03	--	--	--	--	--	--	--	--	1.7E+02	1.9E+01	na	4.6E+03
Nitrate (as N)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Nitrobenzene	0	--	--	na	1.9E+03	--	--	na	1.9E+03	--	--	--	--	--	--	--	--	--	--	na	1.9E+03
N-Nitrosodimethylamine[c]	0	--	--	na	8.1E+01	--	--	na	8.1E+01	--	--	--	--	--	--	--	--	--	--	na	8.1E+01
N-Nitrosodiphenylamine[c]	0	--	--	na	1.6E+02	--	--	na	1.6E+02	--	--	--	--	--	--	--	--	--	--	na	1.6E+02
N-Nitrosodi-n-propylamine[c]	0	--	--	na	1.4E+01	--	--	na	1.4E+01	--	--	--	--	--	--	--	--	--	--	na	1.4E+01
Parathion	0	6.5E-02	1.3E-02	na	--	6.5E-02	1.3E-02	na	--	--	--	--	--	--	--	--	--	6.5E-02	1.3E-02	na	--
PCB-1016	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1221	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1232	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1242	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1248	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1254	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1260	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB Total[c]	0	--	--	na	1.7E-03	--	--	na	1.7E-03	--	--	--	--	--	--	--	--	--	--	na	1.7E-03

Parameter	Background	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				**Most Limiting Allocations**			
(ug/l unless noted)	Conc.	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	**Acute**	**Chronic**	**HH (PWS)**	**HH**
Pentachlorophenol [C]	0	7.7E-03	5.9E-03	na	8.2E+01	7.7E-03	5.9E-03	na	8.2E+01	--	--	--	--	--	--	--	--	**7.7E-03**	**5.9E-03**	**na**	**8.2E+01**
Phenol	0	--	--	na	4.6E+06	--	--	na	4.6E+06	--	--	--	--	--	--	--	--	--	--	**na**	**4.6E+06**
Pyrene	0	--	--	na	1.1E+04	--	--	na	1.1E+04	--	--	--	--	--	--	--	--	--	--	**na**	**1.1E+04**
Radionuclides (pCi/l except Beta/Photon)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	**na**	--
Gross Alpha Activity	0	--	--	na	1.5E+01	--	--	na	1.5E+01	--	--	--	--	--	--	--	--	--	--	**na**	**1.5E+01**
Beta and Photon Activity (mrem/yr)	0	--	--	na	4.0E+00	--	--	na	4.0E+00	--	--	--	--	--	--	--	--	--	--	**na**	**4.0E+00**
Strontium-90	0	--	--	na	8.0E+00	--	--	na	8.0E+00	--	--	--	--	--	--	--	--	--	--	**na**	**8.0E+00**
Tritium	0	--	--	na	2.0E+04	--	--	na	2.0E+04	--	--	--	--	--	--	--	--	--	--	**na**	**2.0E+04**
Selenium	0	2.0E+01	5.0E+00	na	1.1E+04	2.0E+01	5.0E+00	na	1.1E+04	--	--	--	--	--	--	--	--	**2.0E+01**	**5.0E+00**	**na**	**1.1E+04**
Silver	0	3.0E+00	--	na	--	3.0E+00	--	na	--	--	--	--	--	--	--	--	--	**3.0E+00**	--	**na**	--
Sulfate	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	**na**	--
1,1,2,2-Tetrachloroethane[C]	0	--	--	na	1.1E+02	--	--	na	1.1E+02	--	--	--	--	--	--	--	--	--	--	**na**	**1.1E+02**
Tetrachloroethylene[C]	0	--	--	na	8.9E+01	--	--	na	8.9E+01	--	--	--	--	--	--	--	--	--	--	**na**	**8.9E+01**
Thallium	0	--	--	na	6.3E+00	--	--	na	6.3E+00	--	--	--	--	--	--	--	--	--	--	**na**	**6.3E+00**
Toluene	0	--	--	na	2.0E+05	--	--	na	2.0E+05	--	--	--	--	--	--	--	--	--	--	**na**	**2.0E+05**
Total dissolved solids	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	**na**	--
Toxaphene [C]	0	7.3E-01	2.0E-04	na	7.5E-03	7.3E-01	2.0E-04	na	7.5E-03	--	--	--	--	--	--	--	--	**7.3E-01**	**2.0E-04**	**na**	**7.5E-03**
Tributyltin	0	4.6E-01	6.3E-02	na	--	4.6E-01	6.3E-02	na	--	--	--	--	--	--	--	--	--	**4.6E-01**	**6.3E-02**	**na**	--
1,2,4-Trichlorobenzene	0	--	--	na	9.4E+02	--	--	na	9.4E+02	--	--	--	--	--	--	--	--	--	--	**na**	**9.4E+02**
1,1,2-Trichloroethane[C]	0	--	--	na	4.2E+02	--	--	na	4.2E+02	--	--	--	--	--	--	--	--	--	--	**na**	**4.2E+02**
Trichloroethylene [C]	0	--	--	na	8.1E+02	--	--	na	8.1E+02	--	--	--	--	--	--	--	--	--	--	**na**	**8.1E+02**
2,4,6-Trichlorophenol [C]	0	--	--	na	6.5E+01	--	--	na	6.5E+01	--	--	--	--	--	--	--	--	--	--	**na**	**6.5E+01**
2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	**na**	--
Vinyl Chloride[C]	0	--	--	na	6.1E+01	--	--	na	6.1E+01	--	--	--	--	--	--	--	--	--	--	**na**	**6.1E+01**
Zinc	0	1.1E+02	1.1E+02	na	6.9E+04	1.1E+02	1.1E+02	na	6.9E+04	--	--	--	--	--	--	--	--	**1.1E+02**	**1.1E+02**	**na**	**6.9E+04**

Notes:

1. All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise
2. Discharge flow is highest monthly average or Form 2C maximum for Industries and design flow for Municipals
3. Metals measured as Dissolved, unless specified otherwise
4. "C" indicates a carcinogenic parameter
5. Regular WLAs are mass balances (minus background concentration) using the % of stream flow entered above under Mixing Information.
   Antidegradation WLAs are based upon a complete mix.
6. Antideg. Baseline = (0.25(WQC - background conc.) + background conc.) for acute and chronic
   = (0.1(WQC - background conc.) + background conc.) for human health
7. WLAs established at the following stream flows: 1Q10 for Acute, 30Q10 for Chronic Ammonia, 7Q10 for Other Chronic, 30Q5 for Non-carcinogens, Harmonic Mean for Carcinogens, and Annual Average for Dioxin. Mixing ratios may be substituted for stream flows where appropriate.

Metal	Target Value (SSTV)
Antimony	4.3E+03
Arsenic	9.0E+01
Barium	na
Cadmium	6.4E-01
Chromium III	4.2E+01
Chromium VI	6.4E+00
Copper	5.0E+00
Iron	na
Lead	7.3E+00
Manganese	na
Mercury	5.1E-02
Nickel	1.1E+01
Selenium	3.0E+00
Silver	1.2E+00
Zinc	4.4E+01

Note: do not use QL's lower than the minimum QL's provided in agency guidance

Analysis of the FCWA Corbe s Water Treatment Plant luent data for chlorine
Averaging period for standard = 4 days

The statistics for chlorine are:

Number of values	=	1
Quantification level	=	100
Number < quantification	=	0
Expected value	=	105
Variance	=	3969
C.V.	=	.6
97th percentile	=	255.5088
Statistics used	=	Reasonable potential assumptions - Type 2 data

The WLAs for chlorine are:

Acute WLA	=	19
Chronic WLA	=	----
Human Health WLA	=	----

Limits are based on acute toxicity and 1 samples/month, 1 samples/week

Maximum daily limit	=	19
Average weekly limit	=	19
Average monthly limit	=	19

Note: The maximum daily limit applies to industrial dischargers
The average weekly limit applies to POTWs
The average monthly limit applies to both.

The Data are
105

Attachment 8

Public Notice – Environmental Permit

PURPOSE OF NOTICE: To seek public comment on a draft permit from the Department of Environmental Quality that will allow the release of treated industrial wastewater and stormwater into a water body in Fairfax County, Virginia.

PUBLIC COMMENT PERIOD: XXX, 2009 to 5:00 p.m. on XXX, 2009

PERMIT NAME: Virginia Pollutant Discharge Elimination System Permit – Industrial Wastewater and Stormwater issued by DEQ, under the authority of the State Water Control Board

APPLICANT NAME, ADDRESS AND PERMIT NUMBER: Fairfax Water, 8570 Executive Park Ave, Fairfax, VA 22031-2218, VA0087874

NAME AND ADDRESS OF FACILITY: Corbalis Water Treatment Plant, 1295 Fred Morin Road, Herndon, VA 22070

PROJECT DESCRIPTION: NAME OF APPLICANT has applied for a reissuance of a permit for the public Corbalis Water Treatment Plant. The applicant proposes to release treated industrial wastewater and storm water at a rate of 0.25 million gallons per day into a water body. The facility proposes to release the treated industrial wastewaters and storm water in Sugarland Run, an unnamed tributary to Sugarland Run, and in an unnamed tributary to Old Sugarland Run in Fairfax County in the Potomac River watershed. A watershed is the land area drained by a river and its incoming streams. The permit will limit the following pollutants to amounts that protect water quality: Total Suspended Solids, Total Residual Chlorine, and pH.

HOW TO COMMENT AND/OR REQUEST A PUBLIC HEARING: DEQ accepts comments and requests for public hearing by e-mail, fax or postal mail. All comments and requests must be in writing and be received by DEQ during the comment period. Submittals must include the names, mailing addresses and telephone numbers of the commenter/requester and of all persons represented by the commenter/requester. A request for public hearing must also include: 1) The reason why a public hearing is requested. 2) A brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requestor, including how and to what extent such interest would be directly and adversely affected by the permit. 3) Specific references, where possible, to terms and conditions of the permit with suggested revisions. DEQ may hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the permit.

CONTACT FOR PUBLIC COMMENTS, DOCUMENT REQUESTS AND ADDITIONAL INFORMATION: The public may review the documents at the DEQ-Northern Regional Office by appointment.
Name: Alison Thompson
Address: DEQ-Northern Regional Office, 13901 Crown Court, Woodbridge, VA 22193
Phone: (703) 583-3834 E-mail: althompson@deq.virginia.gov Fax: (703) 583-3821

Revised 2/2003

State "Transmittal Checklist" to Assist in Targeting
Municipal and Industrial Individual NPDES Draft Permits for Review

Part I. State Draft Permit Submission Checklist

In accordance with the MOA established between the Commonwealth of Virginia and the United States Environmental Protection Agency, Region III, the Commonwealth submits the following draft National Pollutant Discharge Elimination System (NPDES) permit for Agency review and concurrence.

Facility Name:	Fairfax County Water Authority – Corbalis WTP
NPDES Permit Number:	VA0087874
Permit Writer Name:	Alison L. Thompson
Date:	February 2, 2009

Major [ ] **Minor [X]** **Industrial [X]** **Municipal [ ]**

I.A. Draft Permit Package Submittal Includes:	**Yes**	**No**	**N/A**
1. Permit Application?	X		
2. Complete Draft Permit (for renewal or first time permit – entire permit, including boilerplate information)?	X		
3. Copy of Public Notice?	X		
4. Complete Fact Sheet?	X		
5. A Priority Pollutant Screening to determine parameters of concern?	X		
6. A Reasonable Potential analysis showing calculated WQBELs?	X		
7. Dissolved Oxygen calculations?			X
8. Whole Effluent Toxicity Test summary and analysis?			X
9. Permit Rating Sheet for new or modified industrial facilities?	X		

I.B. Permit/Facility Characteristics	**Yes**	**No**	**N/A**
1. Is this a new, or currently unpermitted facility?		X	
2. Are all permissible outfalls (including combined sewer overflow points, non-process water and storm water) from the facility properly identified and authorized in the permit?	X		
3. Does the fact sheet **or** permit contain a description of the wastewater treatment process?	X		
4. Does the review of PCS/DMR data for at least the last 3 years indicate significant non-compliance with the existing permit?		X	
5. Has there been any change in streamflow characteristics since the last permit was developed?		X	
6. Does the permit allow the discharge of new or increased loadings of any pollutants?		X	
7. Does the fact sheet **or** permit provide a description of the receiving water body(s) to which the facility discharges, including information on low/critical flow conditions and designated/existing uses?	X		
8. Does the facility discharge to a 303(d) listed water?	X		
a. Has a TMDL been developed and approved by EPA for the impaired water?		X	
b. Does the record indicate that the TMDL development is on the State priority list and will most likely be developed within the life of the permit?		X	
c. Does the facility discharge a pollutant of concern identified in the TMDL or 303(d) listed water?		X	
9. Have any limits been removed, or are any limits less stringent, than those in the current permit?		X	
10. Does the permit authorize discharges of storm water?	X		

I.B. Permit/Facility Characteristics – cont.	Yes	No	N/A
11. Has the facility substantially enlarged or altered its operation or substantially increased its flow or production?		X	
12. Are there any production-based, technology-based effluent limits in the permit?		X	
13. Do any water quality-based effluent limit calculations differ from the State's standard policies or procedures?		X	
14. Are any WQBELs based on an interpretation of narrative criteria?		X	
15. Does the permit incorporate any variances or other exceptions to the State's standards or regulations?		X	
16. Does the permit contain a compliance schedule for any limit or condition?		X	
17. Is there a potential impact to endangered/threatened species or their habitat by the facility's discharge(s)?		X	
18. Have impacts from the discharge(s) at downstream potable water supplies been evaluated?	X		
19. Is there any indication that there is significant public interest in the permit action proposed for this facility?		X	
20. Have previous permit, application, and fact sheet been examined?	X		

Part II. NPDES Draft Permit Checklist

Region III NPDES Permit Quality Review Checklist – For Non-Municipals
(To be completed and included in the record for all non-POTWs)

II.A. Permit Cover Page/Administration	Yes	No	N/A
1. Does the fact sheet **or** permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)?	X		
2. Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?	X		

II.B. Effluent Limits – General Elements	Yes	No	N/A
1. Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)?	X		
2. Does the fact sheet discuss whether "antibacksliding" provisions were met for any limits that are less stringent than those in the previous NPDES permit?	X		

II.C. Technology-Based Effluent Limits (Effluent Guidelines & BPJ)	Yes	No	N/A
1. Is the facility subject to a national effluent limitations guideline (ELG)?		X	
a. If yes, does the record adequately document the categorization process, including an evaluation of whether the facility is a new source or an existing source?			X
b. If no, does the record indicate that a technology-based analysis based on Best Professional Judgement (BPJ) was used for all pollutants of concern discharged at treatable concentrations?		X	
2. For all limits developed based on BPJ, does the record indicate that the limits are consistent with the criteria established at 40 CFR 125.3(d)?	X		
3. Does the fact sheet adequately document the calculations used to develop both ELG and /or BPJ technology-based effluent limits?	X		
4. For all limits that are based on production or flow, does the record indicate that the calculations are based on a "reasonable measure of ACTUAL production" for the facility (not design)?			X
5. Does the permit contain "tiered" limits that reflect projected increases in production or flow?		X	
a. If yes, does the permit require the facility to notify the permitting authority when alternate levels of production or flow are attained?			X
6. Are technology-based permit limits expressed in appropriate units of measure (e.g., concentration, mass, SU)?			X
7. Are all technology-based limits expressed in terms of both maximum daily, weekly average, and/or monthly average limits?			X
8. Are any final limits less stringent than required by applicable effluent limitations guidelines or BPJ?		X	

II.D. Water Quality-Based Effluent Limits	Yes	No	N/A
1. Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality?	X		
2. Does the record indicate that any WQBELs were derived from a completed and EPA approved TMDL?		X	
3. Does the fact sheet provide effluent characteristics for each outfall?	X		
4. Does the fact sheet document that a "reasonable potential" evaluation was performed?	X		
a. If yes, does the fact sheet indicate that the "reasonable potential" evaluation was performed in accordance with the State's approved procedures?	X		
b. Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?	X		

II.D. Water Quality-Based Effluent Limits – cont.	Yes	No	N/A
c. Does the fact sheet present WLA calculation procedures for all pollutants that were found to have "reasonable potential"?	X		
d. Does the fact sheet indicate that the "reasonable potential" and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations where data are available)?		X	
e. Does the permit contain numeric effluent limits for all pollutants for which "reasonable potential" was determined?	X		
5. Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?	X		
6. For all final WQBELs, are BOTH long-term (e.g., average monthly) AND short-term (e.g., maximum daily, weekly average, instantaneous) effluent limits established?	X		
7. Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)?	X		
8. Does the fact sheet indicate that an "antidegradation" review was performed in accordance with the State's approved antidegradation policy?	X		

II.E. Monitoring and Reporting Requirements	Yes	No	N/A
1. Does the permit require at least annual monitoring for all limited parameters?	X		
a. If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate this waiver?			
2. Does the permit identify the physical location where monitoring is to be performed for each outfall?	X		
3. Does the permit require testing for Whole Effluent Toxicity in accordance with the State's standard practices?		X	

II.F. Special Conditions	Yes	No	N/A
1. Does the permit require development and implementation of a Best Management Practices (BMP) plan or site-specific BMPs?		X	
a. If yes, does the permit adequately incorporate and require compliance with the BMPs?			X
2. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements?			X
3. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations?	X		

II.G. Standard Conditions	Yes	No	N/A
1. Does the **permit** contain all 40 CFR 122.41 standard conditions or the State equivalent (or more stringent) conditions?	X		

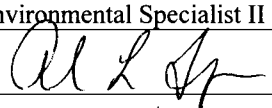
List of Standard Conditions – 40 CFR 122.41

Duty to comply	Property rights	Reporting Requirements
Duty to reapply	Duty to provide information	Planned change
Need to halt or reduce activity not a defense	Inspections and entry	Anticipated noncompliance
	Monitoring and records	Transfers
Duty to mitigate	Signatory requirement	Monitoring reports
Proper O & M	Bypass	Compliance schedules
Permit actions	Upset	24-Hour reporting
		Other non-compliance

2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for existing non-municipal dischargers regarding pollutant notification levels [40 CFR 122.42(a)]?	X		

Part III. Signature Page

Based on a review of the data and other information submitted by the permit applicant, and the draft permit and other administrative records generated by the Department/Division and/or made available to the Department/Division, the information provided on this checklist is accurate and complete, to the best of my knowledge.

Name	Alison L. Thompson
Title	Environmental Specialist II
Signature	
Date	2/2/09